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REPORT

OF

THE PROCEEDINGS

OF THE

PATHOLOGICAL SOCIETY OF LONDON.

III

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REPORT OF THE COUNCIL

PRESENTED TO THE

FIRST GENERAL MEETING OF THE MEMBERS OF THE SOCIETY,

HELD FEBRUARY 1, 1847.

THE COUNCIL OF THE PATHOLOGICAL SOCIETY, on meeting for the first time the Members at their General Meeting, think it desirable briefly to recapitulate the circumstances under which the Society had its origin, and the part which they have acted in the arrangement of its proceedings.

The establishment of a Society which should devote itself specially to the cultivation of Pathology, and render more generally available for this purpose the extensive opportunities afforded by the numerous Medical Charities of the Metropolis, had long appeared to several Members of the Profession to be desirable. Impressed with this view, and encouraged by the success which had attended the proceedings of similar Institutions established in other parts of the kingdom, several Gentlemen met together in the month of February last, and agreed upon the issue of a circular to such Members of the Profession as were known to be more particularly interested in Pathological Studies.

To this circular a sufficient number of favourable answers was received, to encourage the movers to proceed. A Provisional Committee of Gentlemen who had expressed their concurrence, was appointed, and these, after having several times met at the houses of Doctors Babington and Williams, drew up the Plan of the Society as at present constituted, appointed provisionally the several Officers, and agreed upon the issue of a Prospectus to the Members of the Profession at large, inviting their support and co-operation.

This appeal met with unexpected support. The names of numerous Gentlemen were handed to the Secretaries, and on the 20th of October, at the first Meeting of the Society, there were enrolled One Hundred and Six Members.

The Council conceive that the names of the President, Vice-Presidents, and Treasurer provisionally appointed are too well known to the Profession to require any comment on their part, and they cannot but congratulate the Society upon having secured the countenance and services of Gentlemen whose high position and distinguished attainments offer a sure guarantee for the support the Society will receive at their hands.

In reference to the other Members of the Council, it is right to state that they have been selected from those who were either original proposers of the Society, or who were induced to give it their support at a very early period, and who were known especially to have devoted their attention to Pathology. They will further be seen to represent the various Hospitals and Medical Schools of the Metropolis, and to embrace all ranks of the Profession.

In the selection of a Meeting-room the Council were anxious, as far as practicable, to meet the wishes of every Member. They were desirous of fixing upon a locality as

centrally situated as possible, and after much inquiry and deliberation, the present room was selected, as offering peculiar advantages. It was the original intention of the Council that the Meetings should take place on the first and third Tuesday in each month, and as such, advertisements were issued. But from the Horticultural Society holding its Meetings on the same day, it was found impossible to carry out this intention. The Council were therefore compelled to select Monday, the only day of which they could avail themselves. Before the commencement of another session the evening of Meeting will form a subject for mature consideration.

The proceedings of the Society cannot be regarded as at present fully arranged. The Council have, however, been able to prepare, for the approbation of the General Meeting, a Series of Laws for the regulation of the Society, and they hope at a future period to be able to publish a Report of their Transactions.

The success which has hitherto attended the proceedings of the Society, the Council cannot but regard as highly gratifying; the Members have increased in number at each Meeting, and they are now enabled to enumerate a total of about One Hundred and Thirty. The Meetings will, it is believed, be generally admitted to have possessed a high degree of interest. They have been unusually well attended, and the Specimens presented have rather exceeded the number of those which could be exhibited in the time allotted to each Meeting. The latter circumstance the Council view with especial gratification, since they cannot but regard it as establishing the correctness of the view expressed in their original prospectus, that the Society, without encroaching upon any

other in existence, would find a sufficient field of labour amply to occupy its time.

In conclusion, the Council have only to remark that the future usefulness of the Society must mainly depend on the individual exertions of the Members, and with this they trust it will eminently conduce to the advancement of that branch of Medical Science for the cultivation of which it was especially established.

REPORT.

DISEASES OF THE BRAIN AND NERVOUS SYSTEM.

2.—Meningeal Apoplexy.

A specimen of extensive extravasation of blood on the surface of and beneath the visceral arachnoid, less copious at the upper portion of the brain than at the base. The heart was larger than natural, and there existed slight atheromatous deposit at the root of the aorta, and on the mitral valve. The attack of apoplexy was quite sudden, the patient, a female fifty-four years of age, having left St. George's Hospital convalescent from some uterine affection in the morning, and was readmitted in the evening, suffering from an attack of apoplexy. The chief symptoms were excessive restlessness, little or no pulse, blanched and cold extremities. The reaction was very slight, and she sank twenty-two hours after the attack.

Dr. Bence Jones, 16*th of November*, 1846.

3. Meningeal Apoplexy.

The patient, a female, aged sixty-two, who had suffered for a long time from chronic bronchitis and asthma, was taken suddenly ill after her dinner, dropped down insensible, and in a few moments expired. On post-mortem examination, the encephalon was found about the twenty-sixth part in weight of the body. Around the under surface of the right cerebral hemisphere, the crus, and right side of the pons and medulla, was observed a layer of blood, enveloping the origins of the nerves. No blood was found in the cerebrum; the ventricles contained two ounces of reddish serum; the cerebral convolutions were flattened; the air-passages congested, and the lungs slightly emphysematous; there were slight pleuritic adhesions, with a cicatrix at the apex of the left lung;

the heart weighed fifteen ounces, being generally hypertrophied. The liver, spleen, and pancreas were large. Dr. Clendinning remarked, that in this case the brain had suffered compression without laceration or softening, the comatose seizure being attributable partly to enlargement, and partly to incidental congestion, and hæmorrhage at the base of the encephalon: the principal remote causes being the state of the heart and lungs, and the recent meal.

Dr. Clendinning, *3rd of May*, 1847.

4.—Meningeal Apoplexy of the Spinal Canal.

A man of intemperate habits, aged thirty-three, was admitted into the Marylebone Infirmary on Nov. 22nd. On admission, there was observed coldness of the surface, weak but regular pulse, dilated pupils, and general prostration. Shortly before admission, while in a public-house, he suddenly leaned back on his seat with a vacant stare, losing all consciousness. The usual treatment for apoplexy was adopted without effect, and he died on the third day after admission.

The cerebral arachnoid and pia mater were firmly adherent in the median line to the anterior portion of each hemisphere; a small part of the cortical substance, opposite the cribriform plate, appeared softer than natural, accompanied with slight congestion of the corresponding medullary portion; about two ounces of clear fluid was contained in the lateral ventricles. The spinal arachnoid cavity was filled posteriorly with fluid, dark-coloured blood; there were, however, thin coagula on parts of the cord and membranes, which were generally stained deeply red. One lung was congested inferiorly. The heart weighed eleven ounces and three quarters; the liver weighed sixty-five ounces; and the kidneys were double their normal weight. The spleen weighed five ounces and three quarters; the stomach was healthy. Dr. Clendinning remarked that the following positions might be hazarded in reference to this case:—

1. That it was a case of comatose disease of the apoplectic class.
2. That the coma was produced immediately by the cerebral congestion.
3. That the exciting cause of the coma was probably the liquor he had taken.

4. That the remote causes were hypertrophy of the heart, and intemperate habits.

5. That the spinal hæmorrhage should be regarded as a complication rather than a cause of the coma.

Dr. Clendinning, 21*st of December*, 1846.

5.—Extravasation of Blood into the substance of the Pons Varolii.

A specimen was exhibited taken from the brain of a lunatic, who was in his usual health, and taking out-door exercise on Friday. On Saturday he was seized with apoplexy, followed by paralysis of both sides, and he died on Sunday morning. The only evidence of disease detected in the brain was a clot, about the size of a pea, situated nearly in the centre of the pons Varolii, rather more to the right than to the left side. The arteries of the brain were healthy.—Mr. Prescott G. Hewett for Sir A. Morison, 2*nd of November*, 1846.

6.—Extravasation into the Pons Varolii and Crura Cerebri.

A female, sixty-six years of age, left the house of a friend in her usual state of health, on the evening of the 4th of June, and, in less than a quarter of an hour, was observed to reel in the street and fall. She was conveyed to the Royal Free Hospital immediately, and when admitted was breathing stertorously, and completely insensible. She died in four hours. On examination, the arachnoid on the superior surfaces of the brain was found opaque and thick, and adherent to the pia mater, except where fluid was effused into the subjacent cellular tissue. The convolutions of the brain were small, and widely separate. Its substance was firm, and free from any undue vascularity. The ventricles contained four ounces of pale-coloured and limpid fluid, and the adjacent portions of brain were unusually firm, and of natural colour. The pons Varolii and crura cerebri, more especially the left crus, were the seat of a large extravasation of blood, which had extensively broken up the cerebral substance, so as to distend the parts into a bag, yielding an obscure sense of fluctuation. The blood was partially coagulated, and a small portion had escaped from the crus

cerebri in removing the brain. The continuity of the nervous substance was maintained by the under surface of the pons, which for a width of about $\frac{1}{16}$th of an inch was free from injury. The cerebral and vertebral arteries and branches were extensively diseased, but the source of the hæmorrhage could not be detected. The heart was of moderate size, and much loaded with fat. The attached edges of the aortic valves, and the free fold of the mitral, were atheromatous in places, and somewhat ossified. The aorta, also, displayed much atheromatous and cretaceous deposit. The kidneys were of small size, their external membranes firmly adherent, and the exposed surfaces of the organs mottled, granular, and studded with the small cysts common in cases of granular degeneration.

In connexion with the fundus of the uterus there was a fibrous growth of the size of a duck's egg, and a second not larger than a walnut. The former was so firm as only to be cut with considerable effort, owing to the development of small nodules of bone in the centre of the bundles of fibrous tissue constituting the substance of the tumour.

It was remarked that the interest of the case lay in the comparative infrequency of the occurrence of extravasations of blood into the substance of the pons Varolii; and, in the coexistence with the extravasation, of so large an amount of fluid in the ventricles. On careful inquiry of various parties, who had been daily in the habit of seeing the patient, it did not appear that she had ever laboured under any active cerebral disease; but her health had been declining for some months before her death. The limpid character of the fluid contained in the ventricles, and the absence of any undue vascularity or softening in the adjacent portions of brain, were also opposed to the idea that the effusion was due to an acute process. It is, therefore, most probable that the fluid had been slowly accumulating for a long period, in connexion with gradually advancing atrophy of the brain, and was altogether unconnected with the apoplectic seizure. The brain was decidedly much below its normal size, and the atrophy was more especially marked in the convolutions of the hemispheres.

Dr. Peacock, *7th of June*, 1847.

7.—Apoplectic Cell in the right hemisphere of the Cerebrum.

The patient died while under treatment for delirium tremens. On a post-mortem examination, gastric, hepatic, cardiac, and pulmonary disease existed to a great extent. There were no signs of meningeal or cerebral inflammation, but the brain was of remarkable firmness throughout, resembling, indeed, a brain which had been macerated in alcohol. The cell was organized, and was lined by a delicate membrane, fine as the hyaloid or chorion. It presented nothing very unusual, except that the cyst was found fully formed and nearly empty, thirteen days only after the apoplectic seizure. It was observed that this rapid disintegration and absorption of the red coagulum was of rare occurrence, but not unprecedented. In the present instance, Dr. Macintyre was inclined to think the apoplectic seizure was not attributable to the exhibition of opium, for it did not take place till forty hours after the administration of one dose of a single grain of acetate of morphia. The patient slept soundly after this dose, and awoke tranquil, and continued till his death free from drowsiness, contracted pupil, or any other circumstance which could lead to the supposition that the drug acted otherwise than medicinally. Dr. Macintyre, 18*th of January*, 1847.

8.—Caries of the left Temporal Bone, extending through the Tympanum into the anterior wall of the Petrous Portion, and occasioning perforation of the Dura Mater.

The carious condition of the bone had implicated the temporo-maxillary articulation, which was destroyed, with the exception of the fibro-cartilage. Opposite the carious anterior wall of the petrous portion, an ulcer, with smooth borders, about the size of a threepenny-piece, was observed in the dura mater. The entire surface of the left hemisphere of the brain was covered over by a layer of greenish-brown lymph; and a large quantity of arterial blood, apparently from a branch of the middle meningeal, which had ulcerated, was effused on its anterior, lateral, and upper portions, and on the corresponding parts of the dura mater. The condition of the brain and dura mater was illustrated by a drawing.

The preparation was taken from a girl aged sixteen, who had been treated in the London Hospital, by Drs. Frampton and Fraser, for acute endocarditis.

On her admission, the purulent discharge from the ear was not sufficiently great to attract much attention, and she never complained of any head symptoms. As soon, however, as she was placed under the influence of mercury, the discharge greatly augmented; and sixteen days after admission the soft parts of the external ear began to slough. The discharge increased daily in quantity, and ultimately became very profuse, and horribly fœtid. About six weeks after her admission profuse hæmorrhage came on at two distinct periods, and she died comatose, no paralysis or loss of consciousness having been previously remarked.

Mr. N. Ward, 21*st of December*, 1846.

9.—Disease of the Temporal Bone, occasioning Abscess in the substance of the Cerebellum.

The patient, a man, had been totally deaf on the right side for sixteen years, and for the greater part of that time subject to some discharge from the right ear. For the last two years of his life he was troubled with headaches. In August last he was seized with one of these attacks, in which the pain was infinitely more intense, he said, than on any previous occasion. When seen he was found labouring under unequivocal symptoms of acute inflammation. He was treated actively by sanguineous depletion, mercury, blisters, and cold applications to the head, but without success. In about a week paralysis of the right side of the face, and distortion of the mouth to the left, were observed, stupor followed, and went on to coma and death. On dissection the membranes were found intensely inflamed, and the substance of the brain softened throughout, particularly around the ventricles, which were distended with serum. An abscess, which was situated in the substance of the cerebellum, communicated by the meatus internus with the ear, and by numerous carious perforations in the pars petrosa of the temporal bone, with the mastoid cells, which were broken down and soaked with purulent matter. It was rather remarkable that two days before this man's death, when the coma was profound, and the brain probably much disor-

ganized, he all at once recovered his senses, and for some hours conversed coherently about his affairs. He then as suddenly lapsed into coma, and shortly died.

Dr. Macintyre, 18*th of January*, 1847.

10.—Abscess of the Cerebrum connected with disease of the Petrous Portion of the Temporal Bone.

The boy from whom the preparation was taken had been under the care of Dr. Wilson, and had enjoyed good health to within six weeks of his admission into St. George's Hospital, when he had an epileptic attack, which recurred a week after, followed by insensibility and involuntary discharge of urine and fæces. From the last attack he gradually improved, his intelligence continuing however impaired, with ptosis of the left eyelid. He had had from early childhood pain in, and purulent discharge from, the left ear.

On admission, there was a profuse fœtid purulent discharge from the left ear; with ptosis of the left eyelid; dilatation of pupils, particularly the left; and the mouth drawn to the left side.

He died on the fifth day, coma having supervened, after convulsions, two days before death. The vessels of the dura mater and surface of the brain were found congested, the convolutions of the latter being much flattened; the surface of the brain on the left side, corresponding with the squamous portion of the temporal bone, was paler and less consistent than usual. The general structure of the brain was highly vascular; and the lateral ventricles were considerably distended with limpid serum. Occupying the outer part of the left hemisphere and the greater portion of the middle lobe of the cerebrum, was a large abscess, the cyst of which was extremely firm and tough, and lined with a blackish sloughy membrane; it was capable of containing at least six ounces of fluid, and was filled with the most offensive pus. The substance of the brain surrounding the abscess was much softened and pulpy, so that the cyst readily fell away from the surrounding parts when the brain was removed. The lower portion of the wall of the abscess was attached to the dura mater, where it covers the petrous portion of the temporal bone, and at this point a small communication existed between the abscess and the in-

ternal ear, passing through an ulcerated opening in the dura mater. The dura mater covering the petrous portion easily separated from the bone, but did not appear much diseased except around the opening into the tympanum. The surface of the petrous portion was roughened and dark-coloured, and an ulcerated opening existed through its upper wall into the tympanum. The cavity of the tympanum was filled with pus, and the lining membrane was destroyed. Mr. Pollock, *5th of April*, 1847.

11.—Tuberculous Deposits in the Pons Varolii and Cerebellum.

The man in whom this disease was found was under the care of Dr. B. Jones, in St. George's Hospital, and lived six days after admission. He stated his illness to have commenced a month before with a cold, followed, in about three weeks, by weakness in the legs without decided paralysis, and slight delirium. On the day of his admission, there was no paralysis; the tongue was furred; pulse 96; pupils small and sluggish. He could give no account of himself, his whole manner appearing dull and slow. He answered with difficulty, but had no headache. On the following day, the motions passed involuntarily, and the delirium increased; the left pupil then became more dilated than the right; and there was slight strabismus, and strong pulsation in the carotids; death occurred from coma, without convulsions. The arachnoid was found unusually dry; the convolutions flattened; the veins much gorged with blood; and small flakes of lymph were effused beneath the arachnoid on the anterior part of the cerebral lobes. The substance of the brain was firm, excepting around the third ventricle and the canal between the third and fourth ventricles, where the brain was completely softened. The ventricles were distended with clear serum. The base of the brain had a slight sub arachnoid deposition of lymph. The left lobe of the cerebellum contained several scrofulous tubercles; two, as large as beans, were found in the pons Varolii; and one also grew from the dura mater, on the left side of the posterior fossa. The lungs were permeated with miliary tubercles, and a small vomica existed in the left apex. A small tubercle was found in each kidney. Dr. Bence Jones, 18*th of January*, 1847.

12.—Cast and Drawing of Tubercular Melanosis which had pervaded the Whole Frame.

The patient, æt. forty-four, a widow, was admitted into the Marylebone Infirmary in May, having previously been under the care of Dr. Hare. She was feeble and somewhat wasted. The surface of the trunk was dotted thickly with small rounded elevations of a blue colour, which existed also on the legs, though more sparingly. The glands in the groins and armpits were enlarged. A tumour of the size of an orange, existed in the left groin, which was the seat of much lancinating pain passing to different parts of the trunk, affecting particularly, however, the thigh as far as the knee. The left lower extremity was wasted and partially paralysed. She died on the ninth week after admission; constipation, with uncontrollable vomiting, having supervened during the latter part of her life.

In the post-mortem examination, a mass of melanoid deposit was found on the upper part of the right corpus striatum equalling in size a horse-bean; external to this was a hard, pea-sized mass, less dark. In the centrum ovale, and right lobe of the cerebellum there were similar morbid masses. The lungs were normal. Several melanotic tumours were found in the anterior mediastinum. A tumour, the size of an orange, and one smaller, were contained in the liver. A similar one existed in the spleen, as large as a pistol-ball. The omentum was affected both beneath its free and intestinal surface with similar deposits. The internal surface of the jejunum and ileum were dotted with ulcers arising from submucous tubercular deposits: two-and-a-half inches of the ileum, much congested, were found in a state of invagination, having passed through the valve of the colon; this circumstance sufficiently accounted for the constipation and vomiting under which the patient sank.

Dr. Clendinning, *7th of January*, 1847.

13.—Melanotic Cancer in the Spinal Canal, Orbit, &c.

The patient, aged forty-six, of intemperate habits, was admitted into University College Hospital, on the 26th of January. His right eye had been extirpated three years before by Mr. Guthrie,

owing to a bleeding tumour of the size of a plum having been developed, and the power of vision destroyed, from violent inflammation, four years previously. Hemiplegia of the right side followed the operation. He recovered from it, and during the last summer had two attacks of epilepsy. In August last, a small dark swelling, which increased gradually to the size of a marble, formed in the right lower eyelid. Weakness and numbness in the legs supervened at Christmas; and these symptoms in three weeks led to obtuseness of sensation, and loss of all voluntary power. On admission, he could not sit erect without support; there was complete loss of voluntary power below the pelvis, and total anæsthesia in the right leg: he could feel pinching in the left: reflex action was slowly produced by severe pinching, which easily excited vivid erythema: there was tenderness over all the lower dorsal vertebræ: to the right of the linea alba, below the umbilicus, was observed a tumour of the size of a walnut. Under the use of purgatives, and iodide of iron, the patient for a time regained slightly the power of sensation, and reflex action of the limbs. This improvement gradually diminished, and the paralysis invaded successively the abdominal muscles, and the bladder and anus, so that for some weeks before death (which was preceded with several convulsive attacks of the upper extremities and face with temporary loss of consciousness) loss of sensation and voluntary motion was complete below the chest: and slight and tardy reflex action of the legs could be produced only by severe pinching.

On the post mortem examination the body was found much emaciated.

The brain and membranes were healthy: within the spinal canal, closely adherent to the theca externally, there existed an irregular encephaloid mass, mottled with dark spots, extending from the third to the sixth dorsal vertebræ, the bodies of which were carious and infiltrated with cancerous matter. The tumour extended outwards between the spines of the vertebræ and muscles to near the integuments: the portion of the cord beneath it was flattened, soft, and wasted: an ounce of fluid was contained beneath the arachnoid below the tumour. The right optic tract and nerve were atrophied, and the corresponding orbit filled with fat. The melanotic subconjunctival tumour of the left eyelid contained a

fluid like Indian ink, which, under the microscope, presented numerous remarkably caudate, and branched cells filled with dark granular matter, and a few fat globules. Both lungs were studded here and there with various sized tumours of soft medullary cancer, the larger of a French-white colour, and generally interspersed with a few spots of dark hue, and several of an ochre-yellow. The tumours consisted microscopically of numerous cells, oval, candate, and fusiform, mixed up with much fat, in globules and granules. The heart, liver, and pancreas were affected in a similar manner; the tumour beneath the abdominal parietes was analogous in character to those of the other organs.

Dr. Williams remarked that the case presented several points of interest: 1. The recurrence of the disease after the extirpation of the tumour in the orbit, taking place in the spinal canal, the brain being unaffected; and, therefore, differing from those cases lately exhibited to the society by Mr. Dalrymple. 2. The degree and kind of paraplegia implying not mere partial separation of the spinal marrow from the nervous centres, but gradually increasing injury to the medulla itself. 3. The melanotic character of the carcinoma, chiefly in the orbit, but in a less degree in the other growths, the pigment in several of these having an ochreous yellow colour which appeared both within the cells and in the free oil globules and granules. 4. The remarkable predominance of oil-globules in all the growths except that of the orbit; a fact Dr. Williams had frequently observed in many cases of malignant disease, and which strangely contrasted with the uncommon diminution of fat which takes place in the textures generally. Dr. C. J. B. Williams, *7th of June*, 1847.

14.—Microscopic Examination of a Tumour connected with the Tentorium Cerebelli.

Forwarded to the Society by Dr. Hughes Bennett, with the following description and history of the case: —

A lady, between seventy and eighty years of age, two years ago, was seized with loss of consciousness and hemiplegia of the left side, with contraction and rigidity of the left arm. She recovered slowly, the intellect remaining weak, and latterly being very defective. The head, when she died, was the only part examined.

The right corpus striatum, and part of the optic thalamus, were converted into a yellow ochry substance, of a pulpy consistence, presenting, under the microscope, the usual appearances of inflammatory softening. There was also found at the same side, attached to the under surface of the tentorium cerebelli, but causing no corresponding depression on the surface of the cerebellum, a tumour, the size of a walnut, of a soft, fibrinous structure and consistence. Being examined microscopically, the structure was found to consist of round or slightly oval bodies, varying in size from the $\frac{1}{100}$ to the $\frac{1}{20}$ of a millimetre in diameter, apparently solid, transparent, with dark, abrupt edges, shadowed gradually towards the centre, (transmitted light.) Each was enclosed in a sheath of cellular tissue, varying in thickness from the $\frac{1}{20}$ to $\frac{1}{80}$ of a millimetre in diameter. Pressure caused them to crack, generally in a radiated manner, from the centre to the circumference. Excess of ether caused no change in them, neither did acetic acid; although this last reagent rendered the cellular sheath more transparent, and the nuclei proper to this tissue more distinct. These bodies were imbedded in what at first appeared a simple granular matter; dilution with water, however, shewed this to consist of an immense number of fibro-plastic cells, (Lebert,) and fusiform cells, in various stages of development. Here and there, capillary vessels, ramifying in the mass, could be distinguished. *Exhibited by* Dr. R. Quain, *5th of April*, 1847.*

DISEASES OF THE RESPIRATORY ORGANS.

1.—Model of the Lungs of a Man who had survived the operation of Tapping for Pleuritic Effusion six years.

He was thirty-two years of age at the time of his death, which occurred after a severe attack of influenza, of six weeks duration.

* At a subsequent meeting it was stated that the peculiar form of tumour, of which these specimens were examples, consisted chiefly of the phosphate of lime united with an organic structure, and had been previously described by Wagner in his "Handwörterbuch der Physiologie," part vi. They had been observed by Valentino in the choroid plexus and pineal gland.

Six years prior to his fatal illness he had been under the care of Dr. Harrison for four months, in the Marylebone Infirmary, and was there tapped for pleurisy, four or five pints of fluid coming away. The aperture was left open, and daily exudation of one or two pints continued for a week; it closed at the end of the second week. Three several times it opened afterwards spontaneously. He went out at the end of four months, and was at work till his last illness. There was observed, on the post-mortem examination, general bronchitis of the right lung with emphysema; the left lung (the tapping having been performed on this side of the chest) was much reduced in size, being fleshy and like spleen in structure. Dr. Clendinning, *3rd of May*, 1847.

3.—Larynx of a Patient who died after the operation of Laryngotomy.

The patient, aged forty, who had, prior to admission, been treated as an out-patient for secondary syphilis, was suddenly seized with symptoms of acute laryngitis. Laryngotomy was resorted to on the night of the attack, with great relief to the dyspnœa. The slightest attempt, however, at swallowing, was followed by convulsive cough and regurgitation through the nostrils. After the third day, he could breathe pretty freely through the natural passage when the artificial one was closed, and he began to swallow more easily, although some portion of the food came through the tube in the larynx. On the fourth day, erythema extended from the wound to the upper part of the chest, affecting also both forearms and elbows. He continued to go on favourably till the sixth day, when he died quite suddenly. The specimen illustrated that thickened condition of the submucous cellular tissue of the larynx which had, during life, caused an almost entire closure of the rima. The epiglottis was in a state of rigidity, its valvular action being consequently lost, and there were observed two or three spots of albuminous exudation on the mucous membrane, and a film of it on either vocal chord. The deep glands on either side of the thyroid cartilage had suppurated, and on the left side was a quantity of pus, closely confined in the dense cellular tissue, extending interruptedly into the loose cellular tissue behind the œsophagus, to within two inches of the stomach.

Mr. Avery drew particular attention to the proximity of the artificial opening in the larynx to the vocal chords. He thought that this circumstance suggested the propriety of opening the trachea at its upper rings; and in support of this view, he remarked that no less than five fatal cases of laryngotomy, had lately come under his notice, in which he believed that disease in the vocal chords, arising from their proximity to the tube introduced into the artificial opening, had mainly occasioned death.

Mr. Avery, 21*st of Dec.* 1846.

4.—Diseased Trachea and Larynx,

taken from a patient who had suffered from the venereal disease for three or four years, and had been treated at different times with mercury to a great extent. In consequence of the gradually increasing dyspnœa and expectoration, he had tracheotomy performed in the country. Some relief followed the operation; the dyspnœa became somewhat less; but the expectoration was so profuse and fœtid, as to lead to the idea of a foreign body being in the trachea or bronchi. On his coming to London it was deemed necessary to enlarge the original opening made in the trachea, but owing to the rigid state of the rings of the tube, the bone forceps were found necessary. He now went on favourably for a short time; but the dyspnœa and expectoration increased, and at the urgent request of the patient the opening was again enlarged, and the tube worn in the opening was passed lower down. During the operation a violent fit of coughing took place, and two or three pieces of bone were ejected. The patient died shortly after. The left lung was found inflamed at its back part, and there was recent pleuritic effusion on the right side, with old-standing adhesions. Small portions of bone were found in the left bronchus. The posterior part of the cricoid cartilage was entirely destroyed, its place being supplied by membrane, and it appeared that the bones expectorated were portions of the body of the cricoid, which had undergone ossification.

Mr. Liston, *5th of April*, 1847.

DISEASES, ETC. OF THE HEART AND VASCULAR SYSTEM.

Malformations.

1.—The Heart of an Infant consisting of only one Auricle and Ventricle.

The heart was situated in its natural position in the chest. The auricle was separated from the ventricle by tendinous valves; there was only one artery proceeding from the ventricle, and from this a vessel arose in the situation of the ductus arteriosus which divided into two branches, and supplied the lungs. The venæ cavæ and the two right pulmonary veins entered the auricle in their ordinary positions, while the pulmonary veins of the left side formed one common trunk before their termination in the auricle. The vena cava inferior, however, had been destroyed by opening the auricle, and the branch passing from the aorta, which divided into the pulmonary arteries, had unfortunately been cut away in removing the heart from the body.

The child was born at the full period, was well developed, and lived ten days. The late Dr. Combe, who attended it during its short life, stated that cyanosis was perfect over the whole body, but that neither the respiration, temperature, nor muscular action were materially affected. This preparation is mentioned by Dr. Farre, in his work on the "Malformations of the Human Heart;" and a detailed description of it, accompanied by two figures, is given in the ninety-ninth volume of the *Philosophical Transactions.*

Dr. Ramsbotham, *7th of Dec.* 1846.

2.—A Heart consisting of only two Cavities.

A young woman, aged twenty, was delivered of a male child, to all appearances well developed; it refused the breast, and its surface became cold and livid; it had several attacks of dyspnœa, in one of which it died seventy-eight hours after birth. The father is said to labour under heart disease; the mother is healthy. Upon inspecting the body, the abdominal viscera were natural; the vessels of the head were turgid; and the heart was gorged, especially in the cavity which was supposed to be the right auricle;

the lungs were imperfectly inflated. Upon examining the heart more carefully, it was found to consist of only one auricle and one ventricle. The auricle was of large size, and had five vessels opening into it—viz., the superior and inferior cavæ, two pulmonary veins, and the coronary vein. The inferior cava was provided with a large Eustachian valve; each pulmonary vein was formed by the junction of two branches. The auriculo-ventricular opening was of large size, and provided with a valve, the curtains of which were small, thickened and corrugated, and attached by numerous chordæ tendineæ, to four powerful carneæ columnæ. The ventricle was well developed, and dilated into a point at the upper and anterior part, from which arose the aorta, guarded by three semilunar valves: from the posterior part of the aorta, two pulmonary arteries were given off. Coronary arteries were not given off at the aortic sinuses, but a single vessel, which appeared to have originated from the concavity of the arch of the aorta, above the two pulmonary arteries, passed down in contact with the left side of the aorta, and divided at its root into two branches, which were distributed upon the anterior and posterior aspects of the heart.

Mr. Forster, *5th of April*, 1847.

3.—Heart consisting of a single Auricle and Ventricle.

A specimen taken from a child ten weeks old, affected with blue disease. Up to a few days before death the child had increased in weight, appeared lively, and had no difficulty of breathing. It died of convulsions from which it had suffered eight or ten days before. The heart was of a rounded form, and had a flattened appearance. It consisted of one large ventricle from which the aorta arose at the anterior and upper part: this vessel was divided near to its origin, giving off branches which probably supplied the lungs. On cutting into the aorta, the semilunar valves were seen in a normal state; and below these was an irregular opening formed by tubercular projections from the sides of the ventricle. The parietes of the ventricle were rather thicker than natural. Behind the aorta, there were the remains of a vessel which terminated in a cul-de-sac on the surface of the ventricle; and above this, the extremity of a larger artery, which had been divided. The auricle had a larger and smaller

auricular appendix, imperfectly divided by a septum, and two auriculo-ventricular valves. Four veins entered into the auricle: one situated below, and on the right, was of larger size, and corresponded with the inferior cava; another above, and smaller than the last, occupied the situation of the superior cava; the other openings were small, and posterior to the aorta.

Mr. Crisp, *5th of April*, 1847.

4.—Malformation of the Heart consisting in an imperfect separation of the two Ventricles, with absence of the Pulmonary Artery.

This heart was taken from a female twelve years of age, who was found dying (apparently from bronchitis) when her medical attendant was called to her. The following history was obtained from her father. "When born, the accoucheur thought that she could not live, but she had then no blueness of skin; she had been dumb from her birth, and was always very delicate; had been examined by several medical men, who said that her heart was diseased; she had frequent palpitation and dyspnœa on bodily exertion, especially on ascending the stairs, and the action of the heart was sometimes discernible beneath the dress; she was also subject to cough and pain of the side. The hands, feet, lips, and face, were often blue, the last generally so; the ends of the fingers were bulbous; she had, before her death, frequent cough, and expectoration of sero-purulent matter, but as she had often been indisposed, her friends were not alarmed, and, consequently, did not obtain earlier assistance." The heart was rather large, and both ventricles slightly hypertrophied, and of equal thickness; the right cavity was dilated; there was an opening in the upper part of the septum of the ventricles, which would readily admit the little finger; the mitral, tricuspid, and semilunar valves were healthy in structure, but the last were thicker and more lax than usual. Two small vessels, which would admit a common-sized probe, lay on the anterior part of the aorta; they were about an inch in length, and terminated in two or three smaller branches, ending in blind extremities in the parietes of the ventricle, at the root of the aorta, so that the blood must have regurgitated into them from a larger branch. The pulmonary artery was entirely

absent; four pulmonary veins entered the left auricle, and the two cavæ the right. The foramen ovale was closed, and both the auriculo-ventricular valves were normal. The arteria innominata was large, and was given off from the anterior part of the aorta an inch and a half from the commencement of the latter vessel. The aorta was divided close to the left subclavian, and its lower part not examined. The lungs were of their natural size, and their substance normal; the bronchial membrane was highly injected, and covered with sero-purulent fluid. Mr. Crisp, *5th of April*, 1847.

5.—Malformation of the Heart; great contraction of the Pulmonary Orifice; Aorta arising entirely from the Right Ventricle. Aperture in the Septum Ventriculorum.

This heart was removed from the body of a boy, thirteen years of age, who from birth had displayed signs of cyanosis, and died of an attack of pneumonia.

The heart was of ordinary size; the right ventricle had three times the capacity of the left, and its walls were nearly half an inch in thickness, and very firm. The aorta was of large size, and provided with three well-developed valves at its orifice; it arose entirely from the sinus of the right ventricle. The infundibular portion of that cavity was extremely small, and the orifice and trunk of the pulmonary artery would scarcely give passage to a small goose-quill. The valves of the pulmonary artery were only two in number, and were united at their edges, so as to form a perforated diaphragm projecting into the canal of the vessel. The left auricle was small, and the auriculo-ventricular aperture and valves natural. The left ventricle was very small, and had no exit except by an aperture of sufficient size to admit the point of the forefinger, which opened into the right ventricle beneath the origin of the aorta. The right auricle was large, and the auriculo-ventricular aperture and valves natural. There was a small valvular opening in the fossa ovalis. The trunk of the aorta continued very large as far as the point of departure of the ductus arteriosus, and then greatly diminished in capacity. The state of the duct was not ascertained.

Mr. N. Ward for Dr. N. Parker, 19*th of April*, 1847.

6. — Malformation of the Heart, consisting in Contraction of the Orifice of the Pulmonary Artery with Deficiency at the Base of the Interventricular Septum.

In this case there existed extreme contraction of the orifice of the pulmonary artery, with a deficiency in the interventricular septum, and the aorta arose in chief part from the right ventricle. The right auricle and ventricle were of large size, and the walls of the latter thick and very firm. The left ventricle was, on the contrary, small, and its walls thin and flaccid. The left auricle was also small. The foramen ovale and ductus arteriosus were both closed. The heart was taken from a child two years and five months old, who had exhibited well-marked symptoms of cyanosis, which commenced three months after birth. It was remarked that though the recorded cases are numerous in which, with more or less contraction of the orifice of the pulmonary artery, the septum of the ventricles is found deficient, it is far from frequent to meet with these malformations, with, as in the present instance, a closed state of the foramen ovale; and, especially so, when the degree of contraction of the pulmonary artery is extreme. The intensity of the cyanosis, and the duration of life in these cases, bears a general relation to the amount of contraction of the pulmonary orifice and the freedom of communication between the right and left cavities of the heart, through the medium of the open foramen ovale and the aperture in the interventricular septum. Dr. Peacock, *7th of December*, 1846.

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7. — Premature occlusion of the Foramen Ovale; large Pulmonary Artery and Duct, and contracted left Heart.

The following is the history of this case :—

A small infant, the seventh of healthy children by the same parents, was born on Oct. 20th, 1846. His mother had noticed unnatural quietude during the last three months of gestation. Its birth was natural, the head, body, and limbs, well developed, and of the usual colour, till, in about five minutes after it first breathed, its face became dark blue, and the respiration difficult. The ligature on the umbilical cord was untied, but no blood flowed;

the skin soon became generally blue; and the respiration very difficult and irregular; the heart beat about one hundred and thirty in a minute, clearly and strongly; the temperature appeared natural. In eight or ten hours apoplexy came on, the cyanosis being universal, the right arm paralyzed, and the left convulsively contracted. In sixteen hours the child was perfectly comatose, and it died twenty-one hours after birth.

Inspection, twenty-four hours after death.—The body was full grown and well proportioned; the skin marbled with large dark and white patches; the pericardium contained two or three drachms of serum; the lungs were about the usual size, full of dark blood, and slightly emphysematous anteriorly; the liver appeared healthy; the umbilical vein was pervious and empty; the venæ cavæ capacious; the heart rather more vertical than natural, smaller and narrower in consequence of flatness of the left ventricle; both venæ cavæ, the right heart, and coronary veins, were engorged. On opening the right auricle, which was of the usual form, the fossa ovalis was seen in its natural position, but entirely closed by a strong reticulated membrane firmly attached to its annulus, and forming a pouch projecting towards the left side. Below the fossa ovalis, there was a mere vestige of the Eustachian valve; but the valve of the coronary vein was distinct; the right auriculo-ventricular opening was large, patent, and furnished with a valve, differing in form from the usual shape of the tricuspid, but with distinct fixed and distention columns and curtains, and moderator bands, as demonstrated by Mr. Wilkinson King; the walls of the right ventricle were rather hypertrophied, the cavity large, descending not only to the apex, but curving round the left ventricle, so as alone to form the apex of the heart: there was no interventricular communication whatever. The pulmonary artery was very large, being three and a half lines wide at its origin; and a little beyond it, more than four lines; its valves were perfect; it gave off, in the usual situation, branches to the right and left lung, and was then continued perpendicularly upwards, in a scarcely diminishing trunk, the ductus arteriosus, to the under surface of the aortic arch, nearly opposite the left subclavian; so that the blood from it would flow, not only into the descending aorta, but upwards and somewhat contrary to its previous direc-

tion, into the arteries of the head and arms. The four pulmonary veins entered the left auricle, as usual. This cavity was well developed, being wide transversely, and constricted vertically, having a very large muscular appendage. The complete membrane covering the fossa ovalis was here also quite distinct and impervious, and could be readily pushed towards the right auricle; the auriculo-ventricular opening was extremely small, being but one line and a half in diameter. The mitral valve was altogether defective in structure, and seemed to have been faulty in action: it consisted of two very small, whitish, tendinous bands, fixed, the one to the septum, in front, the other to the posterior wall of the ventricle, without any curtains or fleshy bands, which, it seemed, could not have been opposed so as to prevent the reflux of the blood into the auricle. The left ventricle was almost obliterated; its walls contracted on a small cavity at the base, not exceeding two or three lines in diameter, lined by a very dense, smooth membrane. The aortic opening was also very small, being about two lines wide; the sigmoid valves were perfect; the aorta itself was normal in its course, and distribution, but the ascending and transverse portion of the arch was considerably smaller than the pulmonary artery, measuring, at its origin, three lines in diameter, and opposite the left carotid, just before receiving the arterial duct, two lines and a quarter; the descending aorta, after receiving the duct, measuring two lines and three-quarters.

Two points of especial interest arose out of this example of malformation of the heart. The first was,—Which was the primary cause? Did the premature closure of the foramen ovale increase the activity of the right heart and vessels, so as to carry on the circulation of the system, and arrest the development of the left heart, and particularly the mitral valve? Or, was the diseased action first manifested in the mitral valve, which, producing an utterly defective valvular structure, stayed the blood in its course through the left heart, and, presuming the valve of Botal to be early and well developed, thereby pressed that valve against its margin, so as to cause its firm occlusion? The second point, as urged by Dr. Norman Chevers, was "That a close foramen ovale is not a proof in jurisprudence that a child has lived;" for in this case the occlusion must have existed long before birth. The prepa-

ration is deposited in the museum of Guy's Hospital. Mr. Ebenezer Smith, *7th of Dec.* 1846.

8.—Case illustrating the Earliest Stage of the Malformation usually known as Distribution of the Descending Aorta from the Pulmonary Artery.

This specimen was taken from an infant who lived eight hours. The funis and placenta were small. The infant, immediately after birth, breathed freely. On tying the cord, the colour of the surface became dusky, and the respiration soon afterwards grew embarrassed, without, however, any increase in the dinginess of the colour of the body. The respirations became gradually slower and slower, and the child died without convulsions or apparent agony. The body was examined eighteen hours after death. The heart occupied the whole anterior part of the chest, with the exception of a small portion of the right lung, which presented a little interlobular emphysema. The pericardium contained a small quantity of clear fluid. All the cavities, particularly the right auricle, were dilated, and the walls of the ventricles thin. There was no valvular disease; the pulmonary artery was wide; there was a marked contraction of the descending aorta opposite the left subclavian artery; the arterial duct was aneurismally enlarged, and its interior of a dark red colour; the ascending aorta was rather dilated. Dr. Chevers alluded to two similar cases published by Dr. Farre, in which the children lived respectively two days and eight months. The present case occurred in the practice of Mr. W. H. Turner, of Bermondsey.

Dr. N. Chevers, *15th of March*, 1847.

9.—Cyanosis dependent on Patent Ductus Arteriosus with disease of the Aortic Valves, &c.

The patient, a female, aged thirty-four, of phlegmatic temperament and stunted development, was admitted into Guy's Hospital in January, 1847, under Dr. Barlow, and afterwards Dr. Babington. The countenance was pale, puffy, and abundantly streaked with dark-coloured capillary veins. She had scarlet fever at sixteen years of age. She never had rheumatism, nor other known existing cause of heart disease. When six or seven

years of age she suffered from palpitation, shortness of breath, occasional sickness, and swelling of the legs and ankles. She was also subject to cough, and expectorated a good deal, the sputa being occasionally streaked with blood. When fourteen years old she went into the country, and began to grow out of these complaints. She first menstruated at eighteen, and for a time did so pretty regularly. At twenty, her old complaints returned. These symptoms continued, with little alteration, until her twenty-third year, when she came to reside in London. The menstrual discharge then became scanty, and at her twenty-eighth year entirely ceased for a period of five years. During this time she had pain at her proper periods, but the catamenia did not flow, and while this was the case her general ailments were always more severe. After this she returned to the country for eighteen months, when the catamenia reappeared for three months, but again ceased on her return to town. She entered Guy's Hospital in August last, under Dr. Addison, for the symptoms already mentioned, and went out relieved in three weeks; since that time, however, she has been gradually getting worse. On admission, she complained of headache, palpitation, pain below the left mamma, shortness of breath, and cough, which symptoms frequently kept her awake at night, and disturbed her rest by sudden startings and frightful dreams. The tongue was dry, and the tonsils enlarged. She felt nausea occasionally, but digested her food well. Her legs and ankles were swollen. The bowels were open. Urine natural in colour and quantity. The chest was narrow, contracted, and very prominent. The impulse of the heart was forcible; both its sounds were prolonged, (and distinctly audible all over the chest,) but the second especially so. They were accompanied by two loud sawing murmurs, which were heard over the whole præcordial region, but most loudly over the third and fourth sterno-costal articulations, as well on the right as on the left side. There was also strong impulse felt, in this situation, on both sides of the sternum. Immediately after the flap of the valves (which was loud) there followed a sharp click, which was the commencement of the second murmur. This murmur was also heard distinctly over the second sterno-costal articulation. Both sounds were heard over the back of the chest, and down the spine to the sacrum. The heart's action was irregular. Pulsation

could be felt at the top of the sternum. The pulse was irregular, about 88—94. During her stay in the hospital an ecchymotic spot appeared about the middle of each cheek, slightly elevating the skin, and giving a sense of roughness under the finger. She scarcely received any benefit from treatment, but gradually wasted, and sank exhausted on Tuesday, 13th April, at twelve o'clock at noon. While under Dr. Addison's care the late Mr. Wilkinson King saw her, and from his conversation with her he learned that she was a seven months' child. He then diagnosticated "patescence of the ductus arteriosus."

Examination of the body twenty-five hours after death.—The body was emaciated; the feet and ankles slightly œdematous; the superficial veins everywhere very numerous, distinct, and dark; and the ecchymosis on the cheeks was still distinct. The head was not examined. The abdomen contained about a pint of fluid. The liver was slightly contracted, and rather smaller than natural. The lungs were small—some parts of their edges were emphysematous, and some portions of the lungs more fleshy, looking as if they had never been expanded by air, like the lungs of a fœtus. These portions readily sank in water. The pericardium was large, and contained about double the natural quantity of serous fluid. The whole heart was enlarged, and, with the great bloodvessels attached to it, weighed one pound two ounces avoirdupois. Both ventricles were dilated, and their parietes thickened. The mitral valve had a few very small vegetations on its auricular aspect at its insertion in the auriculo-ventricular ring. The lining membrane of the left ventricle was thickened and opaque, but particularly so towards its outlets. The aortic orifice was diminished in calibre, measuring $2\frac{6}{10}$ inches. From the anterior aortic valve there was a large vegetation, about the size of a filbert, occupying about two-thirds of its ventricular surface, attached by a broad root commencing at its free edge. This vegetation was chiefly bony and cretaceous. At the middle of the aortic surface of this valve there was an opening larger than a quill, leading into this vegetation, and which formed a small aneurism, and which, when the heart was opened, contained very dark coagulated blood. The next valve was perforated by several small openings (six in number). On its ventricular surface also there were fibrinous vegetations. The third valve was bound

down by a strong band from its ventricular surface to a circular spot, a quarter of an inch in diameter, at about three-eighths of an inch below its ventricular margin. This spot looked very like an ulceration, the band having been roughly detached from it. Through this valve, which was seven-eighths of an inch in length, there was a large, irregular, but somewhat oval opening, running along its length, three-eighths of an inch long, and a quarter of an inch broad, about the middle of the valve. Within the aorta, a quarter of an inch above, and immediately opposite this valve, there was a miniature valve half an inch in length, and a quarter in depth, with a well-defined sharp edge, forming a little sac. The origin of the pulmonary artery was much dilated, measuring $4\frac{4}{10}$ inches. In the middle valve there were five very small openings, occupying rather its extremities, and there was one minute one in each of the other valves. The aorta was narrowed throughout. Immediately opposite, or perhaps slightly above the giving off of the left subclavian on the lesser aortic curvature, there was a tight narrow band, more than one-third the circumference of the vessel, very much narrowing its calibre. Immediately beyond this band there was a circular opening, larger than a goose quill, surrounded at its narrowest part by small vegetations, and leading into the pulmonary artery, the remains of the ductus arteriosus. At this spot the two bloodvessels were in perfect apposition, so that, strictly speaking, there is no ductus, but a simple opening. Nearly opposite to this opening, but distal to it on the larger concave surface of the aorta, there was a series of oblong, consecutive patches, two and a half inches in length, elevated fully a quarter of an inch above the surface of the vessel, and projecting into it. Into the most proximal and largest of these ran the band already described, so that the one appeared to be a continuation of the other. There was everywhere much atheromatous deposit throughout the course of the aorta. Dr. Babington, 19*th of April*, 1847.

10.—Diseased Heart, in which the root of the Aorta had an opening common to the two Ventricles.

The patient, a delicate female, aged twenty-five, with narrow thorax, had been subject to deranged circulation from her birth. She died from ascites and anasarca. The heart weighed twenty-

six ounces; the right auricle was large and thick, the right ventricle dilated, and encroached on by the bulging of the septum; the tricuspid valves were healthy, and the pulmonary valves thickened. The left auricle was thin and dilated, and the mitral valve thickened, and studded with nodules on its free edge. The left ventricle was dilated and hypertrophied to a great extent, and at the apex of its cavity was observed a fleshy polypus, adherent to the anterior wall, injected, and having a purulent deposit in the centre. The aortic valves were healthy; the foramen ovale closed. The root of the aorta opened between the two ventricles by an aperture of the size of a sixpence.

Mr. Dalrymple, 18*th of February*, 1847.

11.—Perforation of the Ventricular Septum of the Heart.

A young man, about nineteen years of age, was admitted into St. Thomas's Hospital, with acute rheumatism, of which he had suffered from two or three previous attacks. He had some tenderness over the præcordial region, and there was a distinct systolic bruit heard very generally, but most distinctly over the aortic valves; it differed in no respect from the bruit ordinarily attending obstructive disease. The second sound of the heart was distinct and natural. The rheumatic attack presented no particular features, except that there was more lividity of countenance than could be accounted for by reference to the state of the lungs. He recovered of his rheumatism; but an attack of bronchitis was followed by the indications of tubercular disease, of which he died after profuse hæmoptysis. The lividity of countenance had increased prior to death. There was no variation in the cardiac phenomena during the two months that he was in the hospital. On examination the heart was found generally hypertrophied, the mitral orifice enormously dilated, the aortic valves thickened, and presenting numerous vegetations. In the septum between the left ventricle and right auricle there was an opening of the size of a quill, by which the two cavities communicated. Around this opening there was considerable ulceration, warty roughness, with thickening. The rest of the septum was so thin as to be transparent, and appeared to have been originally in that condition, and presented round the opening distinct evidence of recent inflamma-

tion. Dr. Bennett had no doubt that the aperture in the septum had been the result of inflammation.

Dr. J. R. Bennett, *7th of June*, 1847.

12.—Heart with a Congenital Perforation at the base of the Septum Ventriculorum.

The heart was that of a child, eight years of age, who had never exhibited signs of cyanosis. The openings were two in number, and were each of the size of a crow-quill. They were situated in the fibrous portion of the septum of the ventricles.

The specimen was of interest in connexion with the case presented at the last meeting by Dr. Bennett, in which a similar perforation existed, and was attributed to ulceration ;—a process which, though it may occur in the fibrous tissue of the heart, is extremely rare in the muscular structure. The case was further interesting from the presence of a loud murmur having been heard during life at the base of the heart, which, taken in connexion with the symptoms of inflammatory fever, in the first instance present, induced the belief of the existence of endocarditis. The fever subsequently assumed a typhoid character, and the post-mortem lesions were found to correspond.

Dr. R. Quain, 21*st of June*, 1847.

13.—Remarkable Contraction of the Ductus Arteriosus in a New-Born Infant.

The ductus arteriosus was almost closed, being but one-twelfth of an inch in diameter, and capable of admitting only the shank of a large pin, its coats exceeding in thickness those of any other of the large vessels; the interior of the vessel was rugose, and presented a series of small pits, which gave evidence that the process of contraction had been for some time in progress. The state of the duct proved that its closure commenced, and might have been entirely accomplished, before birth, had the child lived to the full period, a fact of especial interest in a medico-legal point of view. The contraction of the vessel was uniform. The pulmonary arteries were wide and well developed, equalling, in fact, the size of the same vessels in a full-grown fœtus. This heart was that of the fœtus exhibited to the Society by Dr. Lloyd, as dis-

playing an imperfect development of the external auditory apparatus. The fœtus was born at seven months and a half, and, after living fifteen minutes, died from hæmorrhage consequent on the umbilical cord not having been tied.

Dr. N. Chevers, *18th of January*, 1847.

14.—Cyanosis from imperfect Dilatation of the branches of the Pulmonary Artery with open Foramen Ovale.

This case was one in which the only departure from a normal conformation of the heart consisted in the small size of the arteries distributed to the lungs; in consequence of which, the trunk and orifice of the pulmonary artery, and the right ventricle and auricle were unusually large, and the foramen ovale had remained unclosed; while the left ventricle and aorta were extremely small. The heart was taken from a child of ten weeks old, which had displayed slight cyanosis during life.

Dr. Peacock, *7th of Dec.* 1846.

15.—Malformation of the Heart consisting in an imperfection of the Auricular and Ventricular Septa.

This heart was taken from a girl of ten or eleven years of age, whose history during life was not known. The interesting points in the case were, first, a deficiency of the base of the inter-auricular septum, with a perfect closure of the foramen ovale. The deficient space allowed of free communication between the two auricles, so that there could only be said to be one auriculo-ventricular aperture. 2ndly. A distinctly tricuspid form of the left auriculo-ventricular valve; and 3rdly, a deficiency at the base of the septum of the ventricles, nearly closed by an extension of the anterior fold of the left auriculo-ventricular valve. The membrane closing the deficiency had been gradually expanded into a small sac, projecting into the right auriculo-ventricular aperture, and having an opening at its extremity, communicating with the cavity of the right auricle. It was suggested, that had this patient survived a few years longer, the sac and the opening into the right auricle would doubtless have enlarged, and have assumed, both in the symptoms during life, and the appearances after death, a very close resemblance to a true aneurism of the

undefended space of the base of the ventricular septum, which had opened into the right auricle. Dr. Peacock, *7th of Dec.* 1846.

Diseases.

16.—Rupture of the Left Ventricle of the Heart.

The subject of this case was seventy-three years of age, and had been ill six weeks, when he was suddenly seized, about noon, with pain in the region of the heart, which was attributed to indigestion; a large quantity of flatus was expelled from the stomach. At half-past four, he vomited some undigested matter. One hour afterwards, he said he was freer from pain, but felt a curious sensation in the cardiac region which he could not describe. Five minutes afterwards he was found dead. On opening the pericardium, a quantity of bloody serum escaped, and the cavity was found to contain a large amount of coagulated blood which had escaped from a small rupture in the posterior part of the ventricle, about one inch from the apex. The chordæ tendineæ were also ruptured; the walls of the ventricle at the injured part did not appear thinner than natural, but intermixed with the muscular fibres was a white, fatty, adipocerous-looking matter. The valves were healthy; the walls of the left ventricle were hypertrophied, being one-third thicker than usual; the lungs were healthy. Mr. Crisp was induced to think, from the examination of a few specimens of spontaneous rupture of the left ventricle, that the altered condition of the muscular substance observed in this instance, was generally present in such cases. Another interesting feature in the case was the time which had elapsed between the commencement of the rupture and the patient's death. It seemed probable that the chordæ tendineæ first gave way, and that the aperture in the wall of the ventricle was subsequently formed.

Mr. Crisp, *2nd of November*, 1846.

17.—Rupture of the Left Ventricle. Fatty Degeneration of the Heart.

A gentleman, aged seventy-two, fat and unaccustomed to take exercise, had suffered for some time from shortness of breath and pain in the chest. He went to bed in his usual state of health, was

seen asleep at three o'clock in the morning, and was found dead at seven. The post-mortem examination shewed the cause of death to have been hæmorrhage into the pericardium from the left ventricle of the heart. There was a rupture in the posterior wall of that cavity. The heart had undergone the fatty degeneration. The coats of the coronary arteries contained some opaque deposits, but their canals were free. The liver was enlarged and coarsely granular. The body contained much fat.

Dr. R. Quain, 20*th of October*, 1846.

18.—A Series of Four Cases illustrative of the Injuries occasionally sustained by the Aortic Valves during Muscular Efforts.

The first of these cases occurred in a smith who, in August 1843, whilst working with a sledge-hammer, suddenly experienced a distressing sensation in the region of the heart, followed by faintness, difficulty of breathing, and a peculiar rushing noise up the chest and neck and in the ears. When seen a few days after, the same symptoms still existed, and there was perceived the peculiar pulse, characteristic of aortic regurgitation, with a double murmur over the seat of the aortic orifice. His symptoms continued, and he died in July, 1845. The heart was found extremely large, weighing 22½oz. There was great dilatation and hypertrophy of the left ventricle, and the contiguous attachments of two of the aortic valves were separated from the walls of the aorta so as to allow two of the valves to drop below the level of the third. The margin of one of the valves was also slightly everted.

Of the other three cases, one occurred in a porter who tried in a passion to force open a door; the second, in a man heavily laden; and the third, in a groom running with a horse. Of each of these cases the symptoms and physical signs were those of regurgitant disease of the aortic valves; and the post-mortem appearances in three of the cases shewed the exact nature of the lesion in each, and that it was connected with the accident referred to. The subject of the fourth case still survived.

The inferences drawn from the cases were—

1st. That the aortic valves are liable to injury during muscular efforts.

2nd. That this injury is not necessarily immediately fatal, but that this will probably be the result in a period varying from one to two years.

3rd. That the symptoms, physical signs, and progress of this injury correspond to those of the like lesion which result from disease. Dr. R. Quain, *20th of October*, 1847.

20.—Heart shewing the results of Pericarditis and Endocarditis, with Partial Conversion of the Exudation into Ossific Matter. Incompetency of the Aortic Valves.

The pericardium was in all parts adherent to the heart, the adhesions, however, being easily detached by the finger: over the right auricle was found a portion of ossific matter, half an inch long, and a quarter of an inch broad, partly loose, and partly embedded in the tissue of the organ and separating its muscular fibres. Several fibro-cartilaginous deposits were found on the right ventricle, and one of these was commencing to be ossified. The cavities of the heart, and more especially the left auricle, were dilated and hypertrophied; the aortic valves were considerably thickened and incompetent; the mitral valve was also thickened and opaque over its entire extent, and on its auricular surface presented a large deposit of bone, which formed a rough projection into the auricle.

The pleural cavities contained a large quantity of serum, and the lungs, in consequence of the compression to which they had been subjected during life, and the impediment formed by the contracted mitral orifice, were in many portions in the state of carnification. The abdominal cavity was distended with serum, and the substance of the viscera gorged with blood. The spleen weighed nearly two pounds, and was greatly enlarged. The liver presented the nutmeg appearance, the result of impeded circulation through the heart, and the kidneys were also much congested.

Dr. H. Davies, 21st *of December*, 1846.

21.—Diseased Heart and Aorta.

The specimen was taken from a woman aged seventy-nine, and was regarded as an example of concentric hypertrophy. The patient was only seen twice before death, and then appeared to be

in great pain, but, owing to mental imbecility, was unable to describe her symptoms.

There was no disease of the thoracic or abdominal viscera, and the thoracic aorta and branches were unusually healthy. The abdominal aorta, for three inches above its bifurcation, was converted into a firm bony cylinder. The right external iliac artery was nearly impervious from ossific deposit; the left was less ossified: the common and internal iliacs were tolerably healthy. In the lower part of the thoracic aorta there was a dense coagulum, occupying the calibre of the vessel, but not adhering to its sides. It was composed principally of fibrin, with a few blood globules.

Mr. Crisp, *7th of February*, 1847.

22.—Disease of the Coronary Arteries; Angina Pectoris.

The patient from whom this heart was taken first came under Mr. Crisp's care in April, 1841, when he was fifty-six years of age. His health before this period had been tolerably good, with the exception of slight attacks of difficulty of breathing. (His father died suddenly of angina pectoris, at the age of fifty-five.) At that time he suffered from dyspnœa and sense of oppression at the præcordia, with pain, extending thence to the left arm and elbow, and sometimes affecting the little and ring fingers. He had also violent pain in the epigastrium, so as to induce him to suppose that he was passing gallstones, although none could be discovered in the evacuations. The pulse was irregular, and the impulse of the heart increased in force—the heart's sounds were natural. These symptoms continued for several days; he was bled from the arm, leeches and fomentations were applied to the side, and small doses of mercury given, so as slightly to affect the gums. He gradually improved in health, and was able to resume his usual avocations; he suffered, however, from frequent attacks of angina pectoris, and the pain in the left arm and fingers was at times very severe, lasting occasionally for four or five days; latterly, he had pain also in the right arm and shoulder. About eighteen months before he had suffered from acute pain in the left side, and a few days afterwards, a small calculus was voided with the urine. Of late, his health had somewhat improved.

Three days before death he suffered from excruciating pain in

the left arm and little finger, which, though relieved by warm applications, soon returned. He also complained of a sense of oppression in the region of the heart—"as if (to use his own expression) the heart had been bound down." He retired to bed about half-past ten on the night previous to his death, slept for five or six hours, and in the morning expressed himself easier than he had been for two or three days. He was able to dress and shave himself, and walk down stairs; and whilst in the act of getting his breakfast, his head suddenly fell forward, and he died instantaneously.

On examination, great abundance of fat was found about the abdominal parietes. Numerous pleuritic adhesions existed on the left side. Both lungs, especially the left, were engorged with blood. The heart was large and flabby, and weighed about fourteen ounces. Both the coronary arteries were ossified in various parts, in some places so as to form a bony cylinder; the left ventricle was dilated; both auriculo-ventricular openings were large; but the mitral and tricuspid valves appeared to have performed their proper functions. The aorta was of its usual calibre, but it contained numerous elevated patches of cartilaginous and atheromatous deposit, as well as three bony plates. The liver was large, but its structure apparently healthy. The gall-bladder was filled with calculi, and its duct impervious. The right kidney was double its natural size; the left, small; and the pelves of both congested; the right contained a small phosphatic calculus.

Mr. Crisp, *7th of February*, 1847.

23.—Endocarditis, complicated with an original Malformation of the Aortic Valves.

The child, which was thirteen months old, had been feeble from birth, and had suffered for some length of time from dyspnœa and cough, which abated after it had been under treatment for eight weeks. This first attack was followed by bronchitis and pneumonia two weeks before it came under the care of Dr. Lloyd, who remarked pallid countenance, great anxiety, hurried respiration, and cough, with dulness at the back part of the chest, and much tubular breathing, accompanied by crepitation. On listening to the heart, the sounds of which were but slightly audible, from

the mucous râle which pervaded the anterior part of the lungs, a distinct, direct, and regurgitant bruit was heard. The child soon sank; and on inspection after death, there were found only two aortic valves; one of these was of the ordinary character, and the other equal in size to two, with an indistinct ridge intersecting its centre. Both valves were very red, rough, hard, cartilaginous on their surface, and puckered.

Dr. Lloyd, 18*th of January*, 1847.

24.—Heart affected with Mitral and Tricuspid Valvular Disease.

The patient, a woman aged twenty-seven, was affected two years before death with cough, accompanied by purulent and bloody expectoration. The apices of the lungs were dull on percussion, and there was tubular respiration and bronchophony. A bruit at the first stroke of the heart was heard below the mamma. She was emaciated and hectic. After having been under treatment for a year and a half, she became, to all appearances, perfectly convalescent, and continued so till within four months of her death. The effects of interrupted pneumonia were observed in either lung, and the mitral orifice, from disease of the valve, was so contracted as not to admit of the introduction of the little finger. The tricuspid valve also was fringed with large adventitious deposits. Dr. Lloyd, 18*th of January*, 1847.

25.—Aortic Valvular Disease.

The subject of this case, a man, aged fifty-two, had suffered from bronchitis for seven years, and died suddenly during sexual intercourse. The heart was found immensely hypertrophied, and the aortic orifice was so small that a probe could hardly be passed through it, and the valves were extremely ossified; the mitral orifice was surrounded by a ring of bone, continuous with that of the aortic aperture. Dr. Lloyd, 7*th of June*, 1847.

26.—Disease of the Aortic Valves and Aorta; Pericarditis.

George S——, aged sixteen, was admitted into St. George's Hospital on the 9th of December, 1846, under the care of Dr. Wilson. He was attacked at the age of fourteen with rheumatic

fever, complicated, as it appears, by some inflammatory action about the heart. On recovery from this illness he went again to work, and, though ever since subject to dyspnœa and palpitation, increased on active exertion, he continued to pursue his usual occupation of a stone-mason up to a week or ten days before admission, when he began to suffer from wandering rheumatic pains, and increased dyspnœa and palpitation, and was obliged to take to his bed. His countenance on admission was anxious, and his breathing hurried. He complained of pains in various parts of the body, more particularly in the right hand and wrist; of pain referred to the cardiac region, increased on inspiration; and of excessive palpitation and urgent dyspnœa. His joints were neither red nor swollen, but he was sweating profusely, and presented all the general symptoms of rheumatic fever, complicated by heart affection. There was extended dulness on percussion in the cardiac region, and considerably increased and extended impulse. The heart's action was regular, but of a peculiar trembling character; the sounds were dull and distant, unaccompanied by any murmur at the apex of the heart, but both attended by a loud murmur at its base: that with the first sound, short and whiffing, was heard loudest on the sternum, quite at the base of the heart; that with the second was prolonged, and as loud over the aortic valves as up the track of the aorta. There was distinct pulsation over the sternal extremity of both clavicles. His pulse was regular, but eminently jerking. He could not lie on his right side, and his easiest position was leaning forwards, with his body inclining to the left. Moist and rather coarse crepitations were universally diffused throughout the chest. There had never been dropsy. By the treatment adopted great relief was obtained, and by the 21st, as all pains had subsided, and the palpitation was hardly more severe than it had been for several months, he was induced to get up for a few hours. On the evening of the 23rd, he retired to bed about seven P.M., and appeared comfortable and cheerful; but about ten P.M., without any complaint of palpitation, he made a sudden exclamation, and expired in a few seconds.

The following was the result of the post-mortem investigation: The left lung was pushed upwards and backwards by enormous enlargement of the heart, which occupied the whole of the anterior

surface of the chest. Both lungs were healthy in structure, though congested at their posterior and inferior parts, and loaded with frothy serum. The opposed layers of the pericardium were universally connected by old and firm adhesions, except just at the root of the large vessels, where there was about a square inch of surface, covered with soft, recent, jelly-like lymph; the heart was enormously enlarged, but without much hypertrophy; the left ventricle was almost sufficiently large to allow of the introduction of the whole hand, and the aorta was also greatly dilated; the aortic valves were thickened, and one shortened; and the mitral valves opaque, and somewhat thickened, but not so as to interfere with their action; they were considerably enlarged, and the tendinous cords of the mitral valves were elongated and developed to an extraordinary degree; the cavities of the right side of the heart were considerably dilated, but their valves healthy. The liver, kidneys, and other abdominal viscera, were healthy.

Dr. Fuller, 1*st of February*, 1847.

27.—Endocarditis, with Obstructive and Regurgitant Disease of the Aortic Valves.

Edward R——, a groom, aged eighteen, was admitted, under Dr. Wilson's care, at St. George's Hospital, on the 9th of December, 1846. Having previously enjoyed good health, he began to suffer, about two months before, from slight cough, dyspnœa, and pain in the chest, referred to the cardiac region. These symptoms, however, were so slight, that he continued his work till a month before, when he was suddenly seized with acute pain on the left side of the chest, dyspnœa, and severe cough. During the last month he had suffered slightly from palpitation, and his feet had occasionally swelled towards evening. He had never had rheumatism, or any injury of the chest. On admission he complained of cough and debility. There was turbulent action of the heart, with extended dulness on percussion in the cardiac region; considerably increased impulse, and dull, imperfect, and confused sounds. The normal sounds of the heart were replaced by a low, continuous murmur, which at times might almost be confounded with an indistinct friction sound. His pulse was exceedingly small and weak, and rather irregular, but did not intermit. His

chest was resonant on percussion at either apex, and the breathing, though accompanied by occasional large, moist crepitations, was vesicular; the urine was loaded with lithates and purpurates, and though on one or two occasions albuminous, not so constantly; his bowels acted freely; his tongue was moist, and but slightly coated. On the 19th inst. his cough became worse, and on the following day was accompanied by aggravation of his other symptoms. The dyspnœa and orthopnœa became excessive, he suffered greatly from palpitation and pain in the region of the heart; profuse hæmoptysis occurred, and his feet and legs became rapidly swollen. From day to day these symptoms became worse, the hæmoptysis continued, the cough increased, and the lower part of either side of the chest became dull on percussion, and he sank, without any material alteration in his symptoms, on the 27th.

The post-mortem appearances were as follow:—Each pleura contained about half a pint of clear bloody serum. The lungs, in their superior third, were extremely congested; in their inferior two-thirds, apparently somewhat inflamed, and much solidified by the effusion of blood. The pericardium contained about three ounces of clear bloody serum. The heart was enormously enlarged; its right cavities were greatly dilated, and the walls unusually thin, but the tricuspid and pulmonary valves were healthy. There was enormous dilatation of the left ventricle, with considerable hypertrophy, and the left auricle was somewhat enlarged. The mitral valve was probably efficient, but on its free margin were several recent pink fleshy vegetations, and on its surface one or two specks of recent lymph. The aortic valves were diseased to such an extent as to render it almost impossible to pass the little finger from the ventricle into the aorta. The free margin of one of the valves had been entirely broken down, and the valve itself destroyed for at least one-half of its depth, while the remaining portion of it was thickened and opaque. At its point of junction with the other valves, but chiefly on the superior surface, was an enormous irregular deposit of calcareous matter, which, projecting into the cylinder of the aorta, at right angles to the walls of that vessel, held the aortic valves in a permanently semi-closed condition, the only egress for blood from the ventricle into the aorta being through the opening afforded by the broken-down

valve, and by such freedom of motion as yet remained in the other two valves. These valves were greatly thickened, and were very rigid along their free margin, and immediately above each of them was a dilated pouch of the aorta, sufficiently large to receive a small hazel nut. The aorta itself, with the exception of the lesion above alluded to, was healthy. The abdominal viscera were greatly congested. Dr. Fuller, 1*st of February*, 1847.

28.—Great Contraction of the Mitral Aperture. Coagula in several large branches of the Pulmonary Artery.

The woman from whose body these specimens were removed was sixty-eight years of age, and the only history obtained was, that she was taken ill one month prior to admission into the Royal Free Hospital, after having been exposed, almost naked, for a considerable time during the night. In the three weeks that she was under observation she had extreme difficulty of breathing, cough, and expectoration, partly muco-purulent, partly bloody, with anasarca of the lower extremities, and effusion in the cavities of the abdomen and thorax. The action of the heart was irregular both in force and frequency. She was attentively and repeatedly examined by the stethoscope, and the sounds of the heart were found flat and imperfectly developed, but were not attended by any distinct morbid murmur.

On examination after death the pleural cavities were found to contain much fluid, and the abdominal and thoracic viscera were much congested. The heart weighed twelve ounces, and all its cavities were distended with blood. The left auriculo-ventricular aperture was contracted, and the valves thickened, rigid, and united, so as to leave only an oval aperture capable of admitting the point of the forefinger, and permanently patent. The left ventricle was very large, and its walls were somewhat thin, and very flabby, and collapsed on division. It was remarked that this case afforded, in the absence of a systolic murmur, an exception to the ordinary signs of disease of the mitral valve. The explanation of the absence of the murmur was, however, readily to be found in the powerless state of the circulation during the whole time she was under observation. The left ventricle was evidently incapable of contracting with the energy requisite to throw a co-

lumn of blood through the patent orifice with sufficient force and rapidity to produce a murmur.

The section of the left lung exhibited obstruction by coagula of two branches of the pulmonary artery. At the anterior and lower edge of the upper lobe of the right lung there was a mass of tissue in the state of pulmonary apoplexy, and, in connexion with this, a large branch of the pulmonary artery was found obstructed; two other branches in other parts of the same lung were similarly affected, and two in the left lung. The coagula were firm, decolorized, and slightly adherent to the coats of the vessels. Their formation was doubtless owing to the long-continued and gradually increasing obstruction to the current of blood in the pulmonary artery, dependent on the contraction of the mitral aperture, and the engorgement of the pulmonary veins, together with the pressure exercised upon the lung by the fluid in the pleural cavities. Dr. Peacock, 1*st of February*, 1847.

29.—Endocarditis, leading to destruction of one of the Aortic Valves, and partial perforation of the Septum of the Ventricles.

The preparation was taken from the body of a man, aged forty-five, who died from softening of the middle lobe of the brain, with considerable effusion of serum in the ventricles and sub-arachnoid cellular tissue. One of the kidneys was almost entirely filled with a substance very much resembling soft mortar, and both testes contained tuberculous matter. He had been a patient in the Charing Cross Hospital three or four months, and was treated for the disease of the testes. During his stay nothing particular happened to call attention to the state of the heart, and, consequently, that organ was not examined. Some six weeks before his death he suffered so much from a rheumatic attack of several of his joints, that he kept his bed for a few days. He recovered, however, quickly under the use of colchicum, and neither then nor subsequently did he complain of palpitation or difficulty of breathing, nor was there any irregularity of pulse. He was suddenly seized with paralysis of the right side, and his pulse was frequently observed, but no irregularity felt, until he began to sink, previous to his death. On examination, the aorta at its origin

and upwards was very much dilated, and the coats otherwise diseased; and directly across the opening above the valves there was stretched a firm adventitious cord, to which was attached three fibrinous deposits, each as large as a small bean, floating loosely in the vessel. The valve situated above, and attached to the septum ventriculorum, was almost entirely destroyed, and in its place was a cavity, containing also portions of fibrinous deposit. This cavity was of considerable size, and was gradually extending through the septum into the right ventricle, and, indeed, seemed to have perforated it entirely, as there was a deposit of lymph between two of the tricuspid valves, which appeared to be continuous with that contained in the cavity itself.

Mr. Avery, 1*st of March*, 1847.

30.—Valvular Disease of left side of the Heart, which had occasioned sudden death.

The patient, a woman, aged sixty, died suddenly, and was not seen during life. All that was known of the symptoms was, that she had had œdematous feet.

On post-mortem examination the brain and membranes presented nothing remarkable, with the exception of some old adhesions of the arachnoid, on either side of the longitudinal sinus, to the convolutions of the brain. The lungs presented only slight tubercular deposit in the apices, and some emphysema. There was very little hypostatic congestion in the depending portions. The liver was granular, not congested. The remaining organs of the abdomen were in the natural condition. All the cavities of the heart were filled with blood, a part of which, on both sides, was converted into polypoid concretions. The large vessels near the heart, both venous and arterial, also contained blood. The mitral and aortic valves exhibited ossific deposits, and closed imperfectly, and there was hypertrophy of the left ventricle. There were also ossific deposits in the aorta. The right side of the heart presented nothing abnormal. The weight of the heart, after macerating five days in water, was thirteen ounces.

Dr. Robert Barnes, 4*th of January*, 1847.

31.—Enlarged Heart, with Regurgitant and Obstructive Disease of the Aortic Valves, and Double Sacculated Aneurism of the Aorta.

The patient, a gentleman, aged fifty-nine, came under observation four years before death, and then exhibited the characteristic signs of the lesion of the aortic valves; and from the dry hoarse grating sound, with strong pulse in the carotids, and a slight dulness on percussion to the right of the upper part of the sternum, the diagnosis of dilatation of the ascending aorta was also made. Twelve months after, in addition to the former signs, circumscribed, visible, and palpable pulsation, with dull stroke sound at the right margin of the sternum, was observed in the first intercostal space. At this period there was much severe pain in the right front of the chest and shoulder, with occasional attacks of spasmodic asthma. During the next two years the case presented little change further than what arose from the occasional accession of severe paroxysms of pain and dyspnœa, with intervals of comparative ease, in which the general health was wonderfully sustained; and although the action of the heart was always so strong and violent as to shake the whole body, the patient generally experienced no discomfort. In the course of last spring, however, the attacks of difficult breathing became more frequent; a cough sometimes occurred, with a peculiar ringing note, and the breath and strength were more permanently impaired. It was now found that the pulsation to the right of the sternum was much reduced in strength, whilst that of the heart had increased, the other signs remaining as before. A loud ringing note was given to the tracheal breath-sound, which caused it to be heard far down in the chest; but further, the breathing was so loudly tubular in both interscapular spaces, as to give rise to a suspicion of the existence of consolidation of the lung, which was not, however, confirmed by other signs or symptoms. The decline in the general health led to the expectation that the kidneys were beginning to become diseased, and, on examination, the urine was found to be albuminous. This rendered the prognosis less favourable, and whereas before, from the extraordinary manner in which Nature had balanced defective mechanism by augmented strength,

it seemed possible that the patient might live for years, it was now (April) predicted that he would probably not survive six months. He died suddenly at the end of October, after increasing symptoms of dyspnœa and anasarca.

On Examination.—The heart was adherent to the pericardium by old loose membranes. The apex reached to the eighth rib at the side, and the confines of the right ventricle extended to the ensiform cartilage, and the margins of the cartilages of the left ribs. This enlargement was mainly due to the great size of the left ventricle, the cavity of which was about thrice its natural size, its wall varying from three-quarters of an inch to an inch in thickness, except at the apex, where it did not exceed one-eighth of an inch. The weight of the heart was about twenty-eight ounces. The valves were healthy, except those of the aorta, all of which were thickened, and the edges of two retroverted, so as to permit free regurgitation, with a large oval perforation at the margin of one, which must also have permitted a reflux of blood. The aorta, from a little above its valves to the termination of the arch, was dilated into a large cavity, varying from two to three inches in diameter, with two diverticular sacs projecting from it, one anteriorly of the size of a pullet's egg, in contact with, and firmly adherent to, the sternum and first right intercostal space, the adherent part being lined with a firm, thick, fibrinous layer. The other sac projected from the upper part of the arch, between the brachio-cephalic artery (the orifice of which was also dilated) and the left carotid, to the extent of two inches in front of the trachea, which it compressed so as to reduce its antero-posterior diameter to three lines; this sac contained no coagulum, and communicated with the arch by an opening admitting two fingers. The aorta, at the commencement of its descending portion, retained its natural dimensions, but just below, it became again dilated into an oval cavity, four and a half inches in length, and five and a half inches in circumference at its largest part. The coats of both these dilated portions of the aorta were much thickened with irregular atheromatous deposit, interspersed with osseous laminæ and spicula. Some of the opaque atheromatous matter taken from underneath the lining membrane of the aorta exhibited under the microscope numerous oil globules, with some granular organic

matter. The two diverticular pouches presented none of these atheromatous or osseous patches, but consisted of the triple arterial tissue, distended in the manner of true aneurism. The kidneys were enlarged to nearly double their natural size, and exhibited the incipient stage of granular degeneration. The only other morbid conditions found in the body were several encysted plastery tubercles, surrounded by contracted tissue at the apex of the right lung, and a puckered cicatrix without contents at the apex of the left lung.

Dr. C. J. B. Williams, *2nd of November*, 1846.

32.—Aneurism of the Arch of the Aorta Bursting Externally.

The patient, a lady, aged fifty-three, came under Dr. M'Intyre's care seventeen months before, for a swelling on the right side of the chest, which she had recently observed. It was situated between the first and second ribs, close to the sternum, the edge of which it seemed to overlap, was circumscribed, of the size of a large walnut, with distinct strong pulsation but no bruit. Breathing and deglutition were unembarrassed, but she complained of a sensation of distress in the chest. In a month the tumour had become irregularly oblong, bulging at each end, the pulsation was stronger, and the skin over it much distended; a sense of suffocation had supervened. From this time it gradually increased for four months, and then became obviously reduced in size and more uniform, there being much abatement of the distress in the chest. During the sixth and seventh months it was stationary, and in the eighth began to subside rapidly, losing in the ninth month its prominence, its existence being evidenced only by the pulsation, and dulness on percussion. This continued during the tenth and eleventh months, the patient enjoying better health than she had done for many years. In the twelfth it, however, assumed its former dimensions, and from this time increased without interruption, stretching down to near the left nipple, and up on the inside of the sterno-mastoid muscle, becoming a span in length. Its increase, towards the end, was much hastened by an attack of bronchitis, the integuments over it becoming tense and erythematous. A slough ultimately appeared at the

upper part of the tumour, and this, on its separation, formed an aperture by which the blood escaped from the aneurism. On examination after death, the swelling was found to have lost much of its prominence. The aperture was now nearly central, and readily admitted a large bougie, for several inches, in a direction downwards and to the left. In dissecting back the integuments towards the tumour, the sac was opened, and some clots came out along with fluid blood. Through this accidental opening the finger was introduced and the cyst explored. It was found to be capacious, with smooth walls, and filled with loosely-coagulated blood. From the outer chamber, a passage was discovered leading straight through the sternum. This hole was large enough to admit the finger, round and perfectly smooth. It communicated with an inner compartment, which was found to be the interior of another division of the tumour, lodged between the laminæ of the mediastinum, and bulging into the right pleural cavity. This second division was nearly globular, and about the size of the closed fist. It was covered by a coat of condensed cellular tissue, through which it adhered firmly to the under part of the sternum and contiguous soft structures. It could be traced to within the pericardium, near its reflexion. From this point it expanded abruptly, and extended to the giving off of the left subclavian artery, the left carotid and the innominata arising from the convexity of the tumour, but neither of them being aneurismal. An adjoining portion of lung had a carnified appearance, but beyond this, though the tumour had contracted extensive adhesions with the surrounding parts, there was no evidence of material injurious pressure having been made on any of them.

The heart was flaccid, and apparently empty. Neither that organ nor the thoracic tumour had been opened, the preparation shewing only the form, size, limits, and relative bearings of the aneurism; consequently, its precise nature, whether formed by simple dilatation of all the arterial tunics, or a rupture of the inner and middle coats, with subsequent extension of the outer, remained undetermined. Dr. M'Intyre, *15th of May*, 1847.

33.—Aneurism of the Aorta Bursting into the Œsophagus.

The preparation was taken from a patient, aged forty-five, who was brought into the Marylebone Infirmary, suffering from emphysema of the lungs, and who died four days after, being too ill at the time of admission to be subjected to a minute examination. The symptoms that came on upon the morning of his death were nausea and hacking cough, followed by the ejection of about half a pint of blood. He died within ten minutes after the escape of the blood. He had been in bad health for four years, and had suffered from cough for several winters. The body was examined twenty-four hours after death. Old pleuritic adhesions were observed on both sides of the thorax; the lungs were emphysematous, the lower lobe of the left being infiltrated with bloody serum. The heart was larger than natural, and weighed thirteen ounces; its valves were healthy; and beneath the inner membrane of the aorta were specks of steatomatous deposit, more abundant near the heart than elsewhere. At the commencement of the arch were two shallow pouches, the larger about three quarters of an inch in diameter; the other below, about half that size. At the transverse portion of the arch, there was a deep aneurismal pouch, filled with fibrin, one inch and a half in diameter, and firmly attached to the front of the trachea. About two inches further on, at the back part of the descending portion of the aorta, was a large aneurism, four inches in diameter, formed of layers of fibrin, resting posteriorly on the bodies of three of the dorsal vertebræ, which had undergone considerable absorption. The coats of the aorta were deficient in two-thirds of the large aneurismal sac. The œsophagus was attached to the aneurism posteriorly. Its mucous membrane was ulcerated on the right and left side; the ulcer, in the latter situation, had involved the muscular coats of the canal, and communicated with the interior of the aneurism by an oblique sinus, more than an inch in length, directed downwards and outwards. The ulcer was a quarter of an inch in diameter. The stomach was filled with a clot of blood, which extended about two inches in each direction into the œsophagus and

duodenum. The clot weighed thirty-four ounces. The kidneys were atrophied, very pale, and slightly granular.

Dr. Clendinning for Dr. Boyd, *2nd of November*, 1846.

34.—Aneurism of the Aortic Arch, bursting both into the Trachea and Œsophagus.

The patient, aged forty-seven, from whom this preparation was taken, was admitted into St. George's Hospital on the 8th of January, 1845, under the care of Dr. Seymour. His symptoms were of sixteen months' duration. They consisted, in the first instance, of pain constantly referred to a small circumscribed spot on the back, and of slightly obstructed deglutition. About three months before admission, these symptoms became very much worse, and when he presented himself at the hospital, he was complaining of most intense pain in the back, about two inches below the junction of the neck and thorax, of very considerable difficulty and pain in swallowing, accompanied by some pyrosis, and of a constant hacking cough, of about two months' duration. His left pulse was decidedly larger and stronger than the right, but there was no stethoscopic indication of cardiac, or other pectoral disease. There had never been hæmoptysis, or hæmatemesis, but on the 9th, the day after his admission, hæmoptysis to a larger extent took place, and was followed, on the 10th, by profuse hæmatemesis. No fresh hæmorrhage took place until the 13th, when hæmatemesis recurred, and he sank in the course of three quarters of an hour. On post-mortem examination, the right lung was found universally and firmly adherent to the walls of the chest, and was gorged with blood and frothy serum towards its posterior part. The left pleura was healthy, and the left lung crepitant throughout, containing far less blood and serum than the right. The pericardium and heart were healthy. The whole of the thoracic aorta was thickly studded with atheromatous deposit, existing, however, in greatest quantity in the ascending portion of that vessel. Just at the arch of the aorta, in the space between the origins of the innominata and the left carotid, but extending chiefly down the posterior wall of the vessel, was a large rugged opening, of the size of half-a-crown, leading into an aneurismal

pouch, containing coagula of blood of various colours; this pouch was formed by the external coat of the artery, thickened in some measure, by the surrounding tissues. Transversely, it projected from a little beyond the right margin of the innominata, which it somewhat pressed upon, to a little beyond the left margin of the left subclavian; superiorly, it passed about an inch above and behind the origin of the large vessels arising from this part of the aorta. But its chief projection was backwards, and rather to the left side, where it had insinuated itself between the trachea and œsophagus, and having become firmly adherent to these parts, had subsequently given rise to ulcerative absorption, so that the cavity of the pouch was thus made to communicate with that of the trachea, as well as with the œsophagus. The opening into the trachea was about the size of a sixpence, and irregular in shape, the cartilaginous rings having been partially and irregularly absorbed: it was situated about an inch above the left bronchus. The aperture into the œsophagus was of an oval shape, and somewhat larger than a shilling, it had irregular margins, and the greater part was blocked up by a dark slough adherent to the neighbouring tissues. Part of this slough, however, had separated, and had thus given passage to a large flow of blood, which was shewn by the firm, dark coagulum, existing in the lower part of the œsophagus. Dr. Fuller, *7th of December*, 1846.

35.—Aneurism of the Abdominal Aorta.

The patient, an attorney's clerk, aged fifty-one years, had complained of pain in the left lumbar region for about eight months; this having been first experienced after a sudden sensation of syncope while rising from his chair. He rallied under the use of stimulants, and was not very often seen by his medical attendant till about a fortnight before his death. He then complained of extreme debility, and increased pain in the lumbar region. His urine was albuminous. There was perceived a well marked fulness on the left side, permanently raising the false ribs, exhibiting undoubted fluctuation and pulsation, and tending to come to a head. The patient gradually sank from exhaustion:—

On examining the body thirty-hours after death, a remarkably

bulbous appearance was presented by the cuticle over nearly the whole surface, and on removal from the coffin the most prominent point of the skin investing the tumour gave way, and allowed the escape of a considerable amount of bloody serum. An examination of the abdomen only was made. On exposing that cavity which was considerably tympanitic, the left kidney was found forced forwards and upwards. The spleen resembled a half-empty sac, and its pulpy contents were of an ink-black colour. On removing the intestines from the body, an extensive layer of cellular tissue was observed behind the peritonæum, which presented a very unusual appearance of emphysema. This cellular tissue invested a large, elongated, and convex black mass, occupying the space between the false ribs and the iliac fossa, and from the vertebral column to about the middle of the crest of the ilium. At its upper portion it could not be detached from the aorta, but became separable near the inferior mesenteric artery. It fluctuated freely in all directions. In endeavouring to separate the lower portion from the vertebral column, the knife penetrated its walls, and a great abundance of fluid blood escaped. On enlarging the opening and removing the clots, in the centre of which was a deposit of bone, a large cavity capable of holding from three to four pints was seen. An oval aperture in the aorta, nearly behind the point from which the cœliac axis arises, opened into the cavity, and from the appearance of its edges was obviously of some standing. The bodies of the third, second, and first lumbar and last dorsal vertebræ were denuded, and the transverse process of the second lumbar vertebra was entirely removed. Dr. Day, 15*th of May*, 1847.

36.—Cases of Rupture of the Heart and large Vessels, the Result of Injuries.

1. *Rupture of the left auricle.*—A man, aged twenty-nine, was admitted into St. George's Hospital, in a state of extreme collapse, the report being that he had fallen from a ladder. At the time of his admission, his face was blue and much congested; the hands extremely cold; and no pulse could be felt in any of the arteries: shortly afterwards, however, the congestion of the face disappeared,

and a small, irregular pulse became discernible at the wrist. He complained much of pain in the chest. The collapse continued, and he died two hours after his admission.

Examination of the body, twenty-four hours after death.—No external marks of injury existed; the cavity of the pericardium was distended by a large quantity of blood, the greater part of which was fluid; the other portion formed a large, thin, and dark coagulum, enveloping the heart; the blood had escaped through a rent in the anterior surface of the left auricle, towards its left side, and passing a small way up the left inferior pulmonary vein; the laceration measured about half an inch in length, and a quarter of an inch in width; the structure of the heart and valves was healthy; a small quantity of effused blood was found in the cellular tissue surrounding the root of the left lung; some patches of ecchymosis existed also in the sub-pleural cellular tissue of the ribs, on the left side, and at the posterior and lateral parts of both lungs, but, with this exception, their structure was healthy; in the abdomen, a small quantity of blood was found in the peritonæum; the liver presented, on the upper surface of its right lobe, two lacerations, measuring about two inches and a half in length, and about two lines in depth; the other viscera were healthy.

2. *Rupture of the right ventricle.*—A man, aged fifty-three, was brought into St. George's Hospital, dead—the report being, that as he was getting down from a break, one of the horses kicked him on the chest, and sent him backwards several feet. When the passers-by ran to his assistance, they found that he was dead. At the examination of the body, nineteen hours after death, no marks of external violence were observed; but on removing the skin from the chest, some blood was found extravasated in the cellular tissue. In the second piece of the sternum, there was a transverse fracture, but without any displacement, notwithstanding the laceration of the periosteum on both sides. On the left side of the chest, the second, third, fourth, fifth, and sixth ribs were fractured in two places, close to the cartilages, and near the spine; on the right side, the second and fourth ribs were also fractured at about three inches from their cartilages. The pericardium was filled with fluid blood, and an extensive laceration

was found on its left side; but no blood had escaped into the pleura, owing to some old adhesions existing between the lung and the pericardium. The heart was somewhat larger than natural; its cavities were dilated, and its muscular structure thin and flaccid. The right ventricle presented on its anterior surface, and at its junction to the pulmonary artery, a laceration through which the tip of the index finger was easily passed into the cavity of the ventricle, immediately below the valves of the artery. The laceration, which ran in a transverse direction, started off from the septum, and ran along the margin of the artery. The other parts of the heart and large vessels presented nothing remarkable. The lungs were not injured; the other viscera were not examined.

3. *Rupture of the septum ventriculorum.*—A boy, aged five, was admitted into St. George's Hospital, having been run over by a heavy cart, which passed over his chest. When admitted, he was in a state of collapse, from which he never rallied, and died half an hour afterwards. The body, which was examined twenty-one hours after death, presented numerous bruises upon the arms, legs, chest, and abdomen. On opening the chest, the lungs were found to be remarkably collapsed, this state being more marked on the left than on the right side; in fact, the left lung occupied so small a space in the chest, that it was thought the pleura must have contained air which had escaped from the lung; but no wound in the lung was found, although a careful examination was made. On the left side, the second and third ribs were fractured near their cartilages, and the fourth, fifth, and sixth, near their angles; on the right side, the third, fourth, and fifth, were also fractured. Both lungs presented numerous spots of ecchymosis, and the left pleura contained a small quantity of blood. No blood was found in the cavity of the pericardium, with the exception of two spots of ecchymosis on the surface of the heart, which appeared quite healthy. One of these spots was on the anterior surface, and the other, about the size of a shilling, on the posterior surface, in the line of the septum, at about its middle part. On making an incision through the serous membrane at this point, and removing the extravasated blood, a slight laceration was observed in the muscular structure of the heart, through which a probe was easily passed, in an oblique direction, into the

cavity of the left ventricle; and on laying open this ventricle, an extensive rupture was found in the septum. This rupture, which was situated at the union of the lower to the two upper thirds of the septum, began at about three lines from the anterior surface of the heart, and from thence passed backwards to the posterior surface, the fibres of which were lacerated, as mentioned above. The rupture, which thus occupied the greater part of the depth of the septum in an antero-posterior direction, in one part extended through its whole thickness, producing an abnormal communication between the two ventricles, through which the tip of the little finger might be passed; and thus the rupture was more extensive on the left side of the septum than on the right. The heart itself was well formed, and its muscular structure healthy in appearance. No rupture was observed about any of the abdominal organs; but a fracture was detected in the left side of the sacrum.

4. *Rupture of the left auricle and of the pulmonary artery.*—A middle-aged man was brought into St. George's Hospital in a dying state, having been thrown from a cart, and probably run over by it. He lived nearly four hours after the injury. At the examination of the body, a large quantity of blood was found in the subcutaneous cellular tissue, and among the muscles of the chest; the sternum was fractured just over the heart; eight ribs were also fractured on the right side, and two on the left. The pericardium was distended with blood; a quantity of blood was also found in the mediastina, and at the root of the lungs, but there was none in the pleuræ. In the front part of the left auricle, and passing transversely above the appendix, was a laceration, about an inch in length, and half an inch in width. In the front of the pulmonary artery, and just before its bifurcation, there was another laceration equally extensive. Both these lacerations extended through the various structures of these parts; but the laceration of the external serous membrane was much more extensive than that of any other structure. The heart itself presented marked hypertrophy of the left ventricle, but otherwise it appeared healthy. The abdomen was also filled with blood, which had proceeded from an extensive laceration of the spleen.

5. *Rupture of the abdominal aorta at its bifurcation.*—A man, aged thirty-five, was brought into St. George's Hospital, dead. It was stated that he was riding by the hospital, when the horse upon which he was mounted suddenly reared and fell backwards. The man was found lying under the animal. At the examination of the body, no external bruises were observed. The cavity of the peritonæum was filled with bloody fluid and large coagula, which had proceeded from an extensive laceration of the aorta, at the point of its division into the iliac arteries, running transversely, and partly dividing the iliacs themselves, especially the left, which was all but separated from the aorta. The left psoas muscle was much lacerated and bruised, and the bones forming the right sacro-iliac synchondrosis were slightly separated from each other, but without much laceration of the soft parts in the neighbourhood. The coats of the aorta appeared quite healthy.

The appearances observed in Case No. 3 have already been slightly noticed in Mr. Henry Lee's report of the morbid appearances, &c., published in the *Medical Gazette* of 1844. Preparation No. 4 is in Mr. Cæsar Hawkins' museum. The others are in the museum of St. George's Hospital.

Mr. Prescott G. Hewett, 18*th of May*, 1847.

37.—Rupture of the Aorta,

probably from violent muscular effort.

A powerful man, thirty-five years of age, was assisting several others in moving a frame of wood, about ten feet high and six broad, and of about three hundred weight, when a gust of wind over-balanced it, and it fell so as to press him beneath it. He immediately turned deadly pale, gasped a few times, and expired. The exterior of the body displayed no mark of violence, except a slight scratch on the left side of the neck. When, however, the integuments were removed from the front of the chest, the upper part of the sternum, and the sternal ends of the fifth, sixth, and seventh ribs, on the right side, and the cartilage of the seventh left rib, were found partially fractured, so that the whole front of the chest had been depressed. The intercostal muscles between the fifth and sixth ribs were extensively torn. Some bloody serum

was effused into the sac of the right pleura, and the cavity of the left side contained nearly two quarts of blood; much blood was also infiltrated into the mediastina. The blood was found to have escaped from the aorta, which, about half an inch behind the origin of the left subclavian artery, was entirely torn across, so that the ends of the vessel were only retained in apposition by its cellular sheath. There was no evidence of direct injury to the vertebræ, or of any part in the neighbourhood of the ruptured vessel. The rest of the organs in the body were natural. In the absence of any proof of direct injury having been sustained by the vessel in this case, its rupture could only be ascribed to the violent action of the heart, consequent on the effort to resist the fall of the frame, in the peculiar position occupied by the man at the time, and while that organ was compressed by the depressed sternum and ribs. This inference is confirmed by the state in which the heart was found when removed from the body. Both ventricles, but especially the left, were extremely contracted, so that their walls were much increased in thickness, and their cavities entirely obliterated; the organ thus afforded a very characteristic example of the condition described by Bertin as concentric hypertrophy. After, however, it had been macerated in water for two or three days, and the contraction had subsided, the cavities returned to their normal dimensions, and the walls became proportionately thinner. The heart was considerably above its natural size, weighing between eleven and twelve ounces avoirdupois. It is well known, that at the point of union of the obliterated end of the ductus arteriosus with the coats of the aorta, it is very usual that the canal of the latter vessel is found somewhat constricted; and this point is generally, also, one of the earliest seats of atheromatous degeneration. The existence of these changes at that point, in the present instance, seems to have determined the occurrence of the rupture of the vessel. Elsewhere, the coats of the aorta though perhaps somewhat thin, were free from disease.

Dr. Peacock, *5th of May*, 1847.

38.—Fatty Degeneration of the Heart.

1*st Case.*—The patient, who was the subject of this case, was only six hours in the Fever Hospital, and the only history obtained was that she had been ill three weeks, and had been insensible three days.

There was slight hypertrophy of left ventricle and atheromatous incrustation upon the ascending aorta. The heart weighed ten ounces. The internal surface of the heart exhibited a speckled or streaked appearance of a buff colour upon the red muscular tissue.

There were old pleuritic adhesions on both sides of the chest: with a splenified and œdematous state of both lungs.

2*nd Case.*—A male, aged forty-four, had been ill five months, and was first a patient in University College Hospital: he stated that his illness began with rheumatism. He was taken worse ten days prior to his admission into the London Fever Hospital. While under treatment his mind was clear, but he was somewhat talkative; his complexion was sallow; there was slight anasarca; and he presented the physical signs of hypertrophy of the heart. The bowels were much relaxed; and the urine deposited uric acid. There were numerous petechiæ on the extremities. Death took place on the fifth day after admission. On examination there was found slight emphysema of lungs with hypertrophy of heart and fatty degeneration. The internal lining of the cavities was much speckled with buff points on the red muscular surface. The heart weighed eleven and a half ounces; the kidneys were healthy; there were a few ulcers in the colon.

Under microscopic examination portions of both of these hearts exhibited the muscular fibrils to be occupied with exceedingly minute beads of oil-globules, arranged somewhat symmetrically in longitudinal and transverse lines—between the transverse and longitudinal striæ; the globules varied slightly in size and required a $\frac{1}{12}$ object glass to demonstrate them satisfactorily.

Mr. Sankey, *9th of June*, 1847.

DISEASES OF THE DIGESTIVE ORGANS.

1.—Great Contraction of the Mouth following Cancrum Oris.

The subject of this affection was a girl of eleven years of age, who had extensive cancrum oris supervening upon measles. Since the healing of the sore, the contraction of the cicatrix was so great that the middle finger only could be introduced into the mouth, and the constriction was becoming every day more and more evident. It was suggested that the deformity could be relieved by a surgical operation; but it had not been proposed to the parents of the child, owing to disease in the upper maxillary bones and nasal septum not having entirely subsided.

Dr. Bentley, *2nd of November*, 1846.

2.—Post-Pharyngeal Abscess.

The sac of the abscess, which was the size of a pigeon's egg, was situated between the bodies of the upper cervical vertebræ and the back of the pharynx, and, from its being flattened in front, did not cause any material projection of the posterior wall of the pharynx. In connexion with the abscess, a second small cyst was prolonged forwards, so as to form a nipple-like swelling in the pharynx, and this compressed and completely closed the orifice of the glottis. Its aperture of communication with the body of the abscess admitted the point of the little finger, and the whole swelling was freely moveable, and perfectly translucent at its extremity and sides. The preparation was from a female infant, seven months old, which had suffered from some dyspnœa for three weeks. The difficulty of breathing became very urgent three days before death. The dyspnœa was constant, though at intervals less urgent, but the slightest exposure to cold, motion, or excitement, brought on a recurrence of extreme difficulty of breathing, which was attended by a peculiar croupy inspiratory sound. There was, throughout the child's illness, no difficulty of swallowing. No other disease was observed after death, with the exception of slight lobular condensation in the lungs; much mucus was contained in the bronchi. The child was teething;

and a second, of the same family, under similar circumstances, and at the same age, had suffered with symptoms similar in every respect; but, by appropriate treatment being employed early in the attack, the progress of the disease was arrested.

Dr. Peacock, 20*th of October*, 1846.

3.—Stricture of the Œsophagus.

The stricture existed at the upper part of the tube, was about an inch in length, and capable only of allowing the passage of a goose-quill. It had existed for a number of years, and there was observed considerable hypertrophy of the constrictors of the pharynx, particularly the inferior. The upper cornua of the thyroid cartilage were so approximated as to leave but a space of five-eighths of an inch between them, being a diminution of about an inch in the length of their normal interval. The patient, who had been under the care of Cruikshank and John Hunter, lived to between seventy and eighty. Mr. Liston, 20*th of October*, 1846.

5.—Ulcer of the Stomach, forming a communication with the Cavity of the Colon.

The ulcer, which was of the size of a sixpence, was situated at the lower part of the large extremity of the stomach, about an inch and a half from its left border. The margins were perfectly smooth, and very intimately connected with the circumference of a corresponding ulcer in the transverse colon, so as to form a common opening. The colon, instead of pursuing its normal course, was bent at an acute angle, the angle corresponding to the site of the ulcer. The mucous membrane of the posterior wall of the gut protruded into the ulcerated opening, so as to form a kind of valve, which divided it into a right and left portion. The cicatrix of another ulcer existed an inch outside, and above this, immediately over the spleen. The patient was fifty-four, and had been under the care of Dr. Spurgin and Mr. Saner. Prior to June, 1844, he appears to have suffered from more or less severe symptoms of dyspepsia. In June, 1844, he was seized with fæcal vomiting, the fæces being partially solid, and not distinguishable from those passed in the ordinary way. The attacks of vomiting returned at periods of various length, sometimes not appearing for

months. The bowels during this time were easily acted on by purgatives and injections, from which latter the greater relief was obtained. When the bowels were at all constipated, the fæcal vomiting returned. He suffered but slight pain, took little food, and was able to pursue his ordinary occupations till within three months of his death. He took little medicine, but an opiate occasionally, and gradually, after two years and a quarter from the first attack of fæcal vomiting, died exhausted. A drawing of the preparation, which is in the London Hospital Museum, was also exhibited to the Society. Dr. H. Davies, *2nd of November*, 1846.

6.—Carcinomatous Disease of the Pylorus.

The person from whom this specimen was removed was forty-two years of age, and had been of very intemperate habits. He had laboured under pain in the epigastrium, and frequent vomiting and confinement of the bowels, for six months. He was rarely able to retain food more than two, four, or eight hours; sometimes, however, the vomiting ceased for two or three days; but after these times he seemed to eject everything which had been taken in the interval. When the stomach was empty he hawked up much glairy mucus, and occasionally vomited considerable quantities of clear but very sour fluid. The pain which he experienced was not severe, and he rather complained of a sense of weight and gnawing in the epigastrium. Pressure in that part excited some tenderness, and gave a sense of resistance, though no distinct tumefaction could be detected. The stomach was found larger than natural, and its coats were throughout much thickened, especially towards the pylorus. The mucous membrane was there much hypertrophied; and the sub-mucous, sub-serous, and intermuscular cellular tissue was infiltrated with dense whitish-coloured deposit, affording an example of the chondroid form of cancer. The coats at the pylorus measured eight French lines in thickness, and the aperture was reduced to a canal so small as barely to allow the little finger to be passed along it. The mucous membrane at the cardiac side of the pylorus was extensively eroded, and an ulcer existed, with a hard, unequal base, and surrounded by an irregular, overhanging edge.

Dr. Peacock, *15th of March*, 1847.

7.—Alveolar Cancer of the Stomach,

taken from a patient of Dr. Protheroe Smith, aged fifty-six, who had suffered for five years from an obscure affection of the stomach, and had at several periods had acute attacks, characterized by great hypochondriac and dorsal pain, constant vomiting, and excessive eructation, accompanied with constipation, and much febrile disturbance. In the intervals of the attacks, general debility, cough, and uneasiness in the left hypochondrium, nausea in the morning, occasional vomiting, spectral illusions, and habitual constipation, characterized her ordinary state of health. The acute attacks became severe in proportion to their frequency, and that from which she died was of a very aggravated form, the hypochondriac pain having extended to the base of the left lung, and other symptoms having supervened indicative of acute pleuro-pneumonia, the vomiting also being incessant. The post-mortem examination was made twenty-four hours after death. The heart was displaced to the right of the median line by the pressure of two quarts of bloody serum in the left pleural cavity, the lung itself being compressed into a small fleshy mass. The peritonæum covering the under surface of the diaphragm was of a deep red colour, and much injected. The stomach was firmly attached to the diaphragm by means of an oval lobulated tumour, of the size of a large egg, which was enclosed within the folds of the small omentum, and was closely connected to the lesser curvature of the stomach, extending from its cardiac to near its pyloric orifice. Externally it was covered by the omentum and fat; when cut across it presented irregular radiating white fibres, dividing its substance into lobuli, containing a yellowish-white substance of softer consistence. Portions of the tumour were more dense, consisting partly, however, of adipose tissue. The stomach was of its natural capacity; the mucous membrane surrounding the cardiac orifice was extensively ulcerated. A section of the tumour subjected to microscopical examination presented

1. A granular blastema.
2. Numerous nucleated cells and parallelograms.
3. Other cells, nucleated and circular, in clusters, which, from

their high refractive power, appeared to contain something analogous to fat.

4. Adipose tissue and oil globules.

The liver was small, pale, and fatty.

From the history of the case it was concluded that the immediate cause of death was perforation of the stomach through the adherent diaphragm into the left pleura, exciting inflammation of that membrane and rapid effusion. The correctness of this view, however, owing to the distension of the pleura with so much fluid, and the short time allowed for the inspection, could not be positively ascertained. With regard to the nature of the tumour, there could be but little doubt of its being that species of carcinoma described by Cruveilhier under the name of the pultaceous cancer. Though it did not present the jelly-like material contained in distinct pouches, described by Otto as the characteristic of colloid cancer, it approached nearer to that form than to any other. Dr. Hensley, *3rd of May*, 1847.

8.—Abscess in the Liver, and Ulceration of the Intestines in a Patient who had been affected with Dysentery.

The patient, who died in University College Hospital, under the care of Dr. Thompson, was attacked with the disease on board a man-of-war on the West Indian station, in June, 1845. The attack lasted nine months; and in the following July severe pain in the right side and shoulder, accompanied with recurrent attacks of dysentery, supervened, and lasted three months. He entered the hospital twenty months after the first attack, when he presented the group of symptoms usually assigned to hepatic abscess, communicating with the lungs. These lasted to the day of his death, the fifteenth after admission. On examination, the upper lobe of the right lung was pale and crepitant, the lower hepatized, forming the wall of a large abscess between it and the liver, the diaphragm in this situation having disappeared; the abscess extended behind the peritonæum and kidney, as far as the cæcum, the pus burrowing among the abdominal and intercostal muscles; the liver contained numerous abscesses, of various sizes, on its right convex portion, and there were two cicatrices; the bronchial tubes opened freely in the upper part of the wall of the large ab-

scess; the hepatic structure which formed the lower wall of the abscess was thickened and darkly injected; and three inches below it a group of yellowish, gritty particles, surrounded by cartilaginous deposit, were observed; the remainder of the liver was much enlarged; the portal system was minutely injected. The small intestines were healthy to within a foot of the cæcum, which, however, presented here and there an effusion of granular lymph on the healthy membrane, in the form of bands; small ulcers existed on the upper part of the ileo-cæcal valve and in the ileum close to it; the lower surface of the valve and the cæcum generally were occupied by an immense ulcer, crossed here and there by bands of thickened mucous membrane, the muscular fibres forming its floor. All the ulcers were undergoing repair by the laminated effusion of plasma over the surface, the fibrin also assuming, in some of the ulcers, a nodular appearance. The lymph under both these forms had been submitted to the microscope by Mr. Bowman, Dr. Parkes, and Dr. Quain, and the result of the examination shewed that the process was in an early stage, no epithelium being detected.

It was remarked, that after a time the surface of ulcers, similar to those in this case, gradually assumes the appearance of mucous membrane, although it was by no means clear that so compound an organ as the colonic mucous membrane was absolutely regenerated. The decision of this fact was a point of great interest, and although in the present case there existed spots of old cicatrization, the process was too much concealed by the recent ulceration to allow of a positive conclusion being drawn from their examination. Dr. Parkes, 15*th of March*, 1847.

11.—Stricture of the Rectum,

taken from the body of a woman, aged forty-six, who was admitted into Guy's Hospital on May 29, having suffered from constipation for thirteen days. Her health had been good until two months ago, when she suffered from constipation and difficulty in passing her motions. She had taken ineffectually a large quantity of aperient medicine before admission, had vomited repeatedly, and passed but little water with pain and difficulty for five days, prior to which the secretion of urine had been abundant. The

countenance was distressed and anxious. The abdomen below the stomach was distended and tender, there was great umbilical pain, and considerable fever. She derived but temporary benefit from the treatment adopted, and died on the sixth day after admission. On examination, recent lymph was found gluing the intestines together; the stricture was at commencement of the rectum, ten inches from the anus. Its structure had a greenish colour, and was not very hard. It admitted of the passage of the little finger, and contained a small fish-bone. The intestines above the stricture were distended with fluid. The remaining viscera were healthy. Dr. Barlow, *7th of June*, 1847.

12.—Stricture of the Rectum.

This preparation was taken from a boy, aged sixteen, who had died from acute peritonitis. The stricture was situate about three or four inches from the anus. It was very tight, and was accompanied with ulceration of the mucous membrane. The stricture was occasioned by a large deposit of medullary sarcoma, external to the muscular fibres of the gut.

Mr. Busk, *7th of December*, 1846.

13.—Extensive Ulceration of the Rectum, of a Syphilitic Character,

taken from the body of a girl, aged twenty-two, who was admitted into the Charing Cross Hospital on the 14th of August, 1846, and who died, five months afterwards, from an accidental attack of erysipelas of the face. The ulceration was interesting on account of its extent, as well as of its duration, and, taking into consideration the length of time it had existed, of its limited depth; it was also interesting from its connexion with syphilis, and from the little suffering it had occasioned. She had been in the hospital a year before, under Mr. Hancock, with an extensive sloughing ulcer in the fourchette, which had burrowed deeply between the vagina and the rectum. When she was admitted on the last occasion, she complained of a copious discharge of pus, sometimes bloody, that poured from the anus in considerable quantity on any sudden movement. This annoyance had existed more than two months before her admission. On examination, the gut, just

within the anus, felt uneven and rough; higher up it was soft and smooth. She suffered very little pain, and her motions were not otherwise unusual than being covered with purulent matter and sometimes streaked with blood. She had numerous indelible marks of previous syphilitic eruption on the limbs and trunk, and she was still suffering from sore throat. The treatment consisted of small doses of bichloride of mercury and sarsaparilla, and astringent injections, with nutritious diet. The discharge gradually diminished so much, that just before her death it had almost ceased, when she was attacked with erysipelas, which proved fatal in a few days.

The rectum was opened from behind, and immediately within the anus, which is surrounded by a circle of vegetations, the ulcer was seen to commence: it extended three inches upwards, and occupied the whole of the internal surface of the rectum to that extent. The edges were rough and uneven above, and below, soft and rounded; the whole surface was smooth, exhibiting the muscular fibres of the intestine quite bare, some of the circular muscular fibres being destroyed. The neighbouring mucous membrane appeared in a healthy condition, and the whole ulcer gave the idea that the ulcerative process had been arrested, and that of reparation was about to commence. A deep hollow in the fourchette shewed the situation of the ulceration (most probably a primary syphilitic one) for which she came into the hospital a twelvemonth ago, and there is little doubt but that the ulcer of the rectum itself was one of the phenomena of secondary syphilis.

Mr. Avery, 1*st of February*, 1847.

14.—Two Specimens of Large Fibrous Polypus of the Small Intestines.

The preparation first exhibited was presented to the museum of St. George's Hospital by Dr. Ogier Ward. The patient, a woman, aged thirty-four, applied to the Kensington Dispensary on account of pain in the right side, with constipation, which were relieved by aperient medicine; but two days after she was seized with vomiting and constipation, which continued, with little interruption, up to the seventh day after the setting in of the urgent symptoms, when she died. The matter vomited was first of a green colour,

but subsequently appeared like thin gruel. There was no pain in any part of the abdomen. The body was examined twenty hours after death. The peritonæum did not appear to have been inflamed. At about three feet from the cæcum, there was extensive invagination of the small intestine; the invaginated part, which was easily drawn out, presented no marks of inflammation on its outer surface; but its mucous membrane was dull and grey, having a gangrenous odour. Immediately below the invaginated portion of intestine was a tumour, of the size and shape of a pear, connected to the inner surface of the gut by a long pedicle. This tumour was dark and livid, and supplied with several vessels: its texture was remarkably firm, and it presented a marked fibrous appearance. In this case, the invagination of the gut was not connected with the polypus, which was situated below the invaginated portion.

The second preparation consisted of a portion of the small intestine, in which there was a permanent invagination of the gut, connected with the polypus.

The preparation was taken from a man, aged forty-six, admitted into St. George's Hospital, under the care of Dr. Nairne, with symptoms of peritonitis, accompanied with diarrhœa, profuse perspirations, sleeplessness, and emaciation. The diarrhœa, which had existed for some months, was preceded by obstinate constipation, of eight days' standing. The urgent symptoms were slightly relieved, but soon returned, and the patient died on the seventeenth day after admission.

On examination an extensive effusion of puriform fluid was found in the cavity of the peritonæum, fœtid, and apparently mixed with fæculent matter. The peritonæum covering the intestines was in many places very much thickened, and of an ash-grey colour. The small intestines were much distended, especially at the upper part; and the omentum, thickened and contracted, was, together with a convolution of the small intestine, firmly united by a broad band to the parietal peritonæum of the left lumbar region. After detaching the adhesions, an invagination was found in this part of the small intestine, which was two feet from the cæcum. Above the invagination, there was an enormous dilatation of the intestine; and below it, there was

slight contraction. On laying open the intestine, a large polypus was found connected with the invaginated portion, from which it depended into the cavity of the gut. It was pyriform, two inches and three quarters long, and about one inch and a half wide at its broadest part; the pedicle by which it was attached to the gut was of the size of the middle finger, and an inch and a half long. The surface of the polypus was quite smooth; the texture of it was livid, and quite firm, presenting the appearance of fibrous tissue, and was plentifully supplied with bloodvessels. The peritonæal surfaces of the invaginated portions of the gut had become firmly united, and this portion of the intestine was dark and livid. The intestine immediately above presented, towards its mucous surface, a broad ulceration occupying two-thirds of its diameter; here, the gut easily gave way when pulled upon, and allowed the contents to escape before it was laid open. Examined by the microscope, the structure of the polypus proved to be decidedly of a fibrous nature.

The last case, it was remarked, presented a point of very great interest, the existence of the broad ulceration in that part of the gut which was situated immediately above the invagination—an ulceration by which the invaginated portion of the gut, with the polypus, might have been separated and passed by stool.

The two preparations are preserved in the museum of St. George's Hospital.

Mr. Prescott G. Hewett, *2nd of November*, 1846.

15.—Internal Strangulation between Bands of Mesentery, with Fibrous Polypus of Intestines.

The preparation exhibited to the Society was taken from the body of a man, sixty-five years of age, who was admitted, in a state of great collapse, into the Royal Free Hospital, and died before he could be got to bed.

The viscera of the head and thorax were found free from disease. The left testis had not descended into the scrotum, and lay immediately external to the abdominal ring. The abdomen was tympanitic. The omentum was attached by old adhesions to the left iliac and inguinal regions. The small intestines were much inflated, intensely inflamed, and matted together by mode-

rately firm lymph. From the point of adhesion of the omentum at the left groin, a fibrous band extended obliquely across the hypogastrium towards the right iliac region, and this, when two or three inches from the head of the cæcum, united with two loose bands of omentum, connecting it with the caput cæcum on the one hand, and the internal extremity of Poupart's ligament on the other. Between these bands a triangular space thus existed, having its apex at the union of the three, and its base formed by a portion of omentum attached to the cæcum and to the parietes of the abdomen in the right iliac region. Into this space, a portion of the intestine was found to have passed from behind, and to have there become strangulated. The stricture at the upper end of the strangulated intestine was situated six inches and a half above the termination of the ileum, and was so tight that the coats had become gangrenous, and, on tearing apart some soft adhesions uniting that portion of intestine to an adjacent fold, some fluid fæcal matter made its escape. The lower extremity of the strangulated portion was two inches above the ileo-cæcal valve, and at this point there was only a slight furrow on the anterior surface of the intestine; on opening its interior, however, an oval polypus of the size of a large marble was found attached by a broad base to the anterior wall, and occupied so large a portion of the canal, that the point of the forefinger could barely be made to pass behind and below it. The whole length of the strangulated portion was two inches and a half. The intestine, above the upper stricture, was extremely distended with fluid fæcal matter, and its coats were intensely inflamed. Below the stricture, the canal was empty and contracted; and, with the exception of much thickening of the coats of the extremity of the ileum and of the ileo-cæcal valve, it was free from disease. A slight furrow on the external surface of the intestine, at a point thirty-three inches above the termination of the ileum, indicated the situation at which the long band of omentum, reflected from the left inguinal region, had crossed the gut. A hard tumour, of the size of a large walnut, was situated in the ileo-cæcal meso-colon. It was bounded by a dense and thick fibro-cartilaginous cyst, and was apparently an enlarged and softened gland.

It appeared at the inquest which was held to ascertain the

cause of the man's death, that he had been indisposed, and suffering from confinement of the bowels, for six days. He had, however, during this time, continued to follow his engagements, and went out as usual on the morning of his death. Owing to particular circumstances, it was impossible to collect any accurate information as to his previous state of health.

Dr. Peacock, 15*th of March*, 1847.

16.—Crural Hernia, situated external to the Femoral Vessels.

This preparation was removed from a body brought for dissection to King's College. No history of the case could be obtained. The subject was an elderly female.

The preparation shewed a crural hernia situated external to the femoral vessels,—that is, in the place where a psoas abscess usually points in the thigh.

The hernia, which was double,—one existing on each side,—was evidently formed by a protrusion of that thin part of the fascia iliaca which is situated above the crescentic margin of the same fascia, and is connected with, and strengthened by, the offshoot from the outer margin of the psoas parvus tendon. The hernia had the usual peritonæal sac formed of the peritonæum, covering the iliac fossa, and it had extended underneath Poupart's ligament, along the surface of the iliacus internus muscle into the thigh. On the right side the rupture contained the appendix vermiformis and the cæcum; on the left side, a part of the sigmoid flexure of the colon. The left rupture was readily reducible; that on the right side incompletely so, as the appendix vermiformis still remained in the sac. Such a rupture was very rare, if not unique, and might readily be mistaken for psoas abscess.

Mr. Partridge, 7*th of December*, 1846.

17.—Strangulated Femoral Hernia,

from a female aged eighty-four, who had suffered from symptoms of strangulation for ten days before death. The hernia had existed for a few months. Stercoraceous vomiting occurred on the fourth day, and she died from gradual exhaustion, her friends having resolutely opposed the operation.

At the inspection, twenty-four hours after death, the convex portion of the stomach was seen within half an inch of the pubis, being dragged down by the omentum, which, in passing over the small intestines to enter the hernial sac, appeared slightly to constrict a portion of the ileum. The hernial sac was filled with omentum, which was so begirt by its neck that it could not be returned. No trace of inflammation was found in the peritonæal cavity. The gall-bladder was small, and contained two biliary calculi; its duct was impervious. The right kidney contained cysts filled with sero-purulent fluid.

Mr. Crisp, *2nd of November*, 1846.

18.—Strangulated Obturator Hernia.

The patient, aged sixty-seven, was admitted into St. George's Hospital, with symptoms of strangulated hernia. She stated that she had suffered from hernia in the left groin for the last seven years, and that she had been in the habit of wearing a truss. Four days previous to her admission the gut had slipped down behind the truss, which was followed by intense pain in the abdomen; she, however, succeeded in reducing a portion of the tumour, which was of the size of a pigeon's egg, and the following day a surgeon reduced the remaining portion of it. On her admission into the hospital no tumour could be felt in the left groin; but she was in a very low state. Stercoraceous vomiting, hiccough, &c., were present, but without pain or tenderness in any part of the abdomen. Injections, and calomel and opium, were administered without any relief; and as a small swelling was obscurely felt in the left groin on the following day, an incision was made in this region, and a small, hard tumour was laid bare, situated close to the external abdominal ring, which was large and quite free. The symptoms went on increasing, and the patient died on the second day after her admission.

On examining the body an old hernial sac, of the size of a small walnut, was found in the left groin. This sac, which was quite empty and flaccid, was traced through the external ring into the abdomen, where its opening into the peritonæum would scarcely admit of the passage of a quill. The convolutions of the small intestine were of a dark colour; but no inflammatory effusion ex-

isted in any part of the peritonæum. After a careful examination, a knuckle of small intestine was found passing through the left obturator foramen, where it was tightly fixed; the gut was, however, withdrawn from its situation, when two-thirds of its diameter were found to have been strangulated, producing an appearance resembling that of a diverticulum. The strangulated portion of gut was healthy in structure, but of a dark livid colour; it was situated about eight feet from the ilio-cæcal valve, all the portion of intestine above the strangulation being much dilated, and that below it much contracted. The sac which had contained this portion of the gut was of a dark colour; it was of the size of a large walnut, and situated to the inner side of the obturator nerve and vessels, a large branch of the artery partly encircling its neck. The whole of this hernial sac was situated beneath the obturator externus muscle, between it and the ligament, the fibres of the muscle being expanded over the surface of the sac. Its point of communication with the cavity of the peritonæum easily admitted the tip of the forefinger.

Mr. Prescott G. Hewett, 21*st of December*, 1846.

19.—Inguinal Hernia containing the Cæcum, and part of the Colon, with an entire Peritonæal Sac.

The patient, aged sixty, from whom the cast was taken, died very suddenly, having suffered before death from chronic inflammation of the brain and its membranes. The hernial tumour was on the right side, and was large, rounded, and symmetrical, the communication with the abdomen being, in comparison with the protruded portion, very small. The skin of the pubis was so distended over the penis as to conceal it. There was a distinct fluctuation anteriorly. The whole of the cæcum, the ascending and part of the transverse colon had passed into the scrotum, the inguinal canal was destroyed, there being a direct opening from the abdomen. There was no stricture, although the protruding points were closely adapted to the opening. The mesenteric portion of the peritonæum attaching the cæcum to the iliac fossa, together with the ascending and part of the transverse meso-colon, were drawn down from their positions, but still maintained connexions by bands of thickened cellular tissue. The stomach was drawn

into a vertical position. The small intestines were full of fæces.

Dissection of the hernia.—The skin was not thickened, and but slightly connected to the subjacent parts; there were distinct fasciculi of the cremaster muscle, passing anteriorly and laterally; the testicle was in front and nearly in the centre; the vessels of the spermatic cord were much separated; the vas deferens and the spermatic artery lay on the inner side, and the veins were about an inch external; the fascia transversalis was much thickened, and partook of a fibrous character; it was easily separated from the sac, which was about a line in thickness, and quite opaque, not containing any fluid: the protruded parts were not in any way twisted, they were filled with fluid fæces; the omentum was drawn up into a small hard lump at the bottom of the sac; there was no adhesion either of the omentum or intestine, to the sac. The relation the parts bore to each other in their passage through the ring, were internally, ileum, next omentum, and externally, colon; not more than an inch of the ileum had passed through the ring; the cæcum was in an unusual degree covered with peritonæum; the protruded parts presented no marks of constriction.

It was remarked that probably there had been originally a protrusion of the small intestines, and at some subsequent period they had passed up, and the cæcum descended, and ultimately pulled the colon after it: there must have been a perfect meso-cæcum. This circumstance of necessity facilitated its descent, whether it passed into a sac already formed or not. Although there were no adhesions of the protruded parts to the sac, a return of them would have been difficult, if not impossible, on account of the smallness of the ring, the large quantity protruded, the locking of the cæcum against the outside of the ring, and the lump of hardened omentum. The smallness of the neck of the hernia is sufficiently explained by only one portion of large intestine passing through the ring. The fluctuation produced by the fluid fæces occasioned the idea of a complication of hydrocele with the hernia. Mr. H. H. Walton, 21*st of November*, 1846.

20.—A large Inguinal Hernia,

containing a portion of omentum, with about two inches of ileum, the cæcum, the ascending, and a portion of the transverse colon. The peculiarity of the specimen was the presence of a much more extensive peritonæal investment to the cæcum and ascending colon than is usually found, so that those portions of intestine had, by a movement "*en bascule*," descended into the sac. The caput coli had, in fact, a complete mesentery, (instead of merely descending with its "fleshy connexions," as stated by Scarpa,) so that it was reducible with the greatest facility, a fact of importance in a practical point of view, the opinion generally entertained being that it was irreducible. — *Dissection by* Mr. Morton, *exhibited by* Mr. Liston, *5th of April*, 1847.

21.—Internal Strangulation of the Sigmoid Flexure of the Colon, from the twisting of the gut on itself.

The patient, a man, aged twenty-eight, was admitted into the Dreadnough Hospital in a moribund state, having suffered from irremediable constipation for five days. He died five hours after admission; and, on examination, the sigmoid flexure was remarked occupying nearly the entire portion of the front of the abdominal cavity, and in a gangrenous condition. It was immensely distended, obliteration of the muscular bands and rupture of the serous coat having resulted. It appeared, from a careful examination, that this portion of the gut had been originally highly developed, and that it had become strangulated from falling over on itself towards the right side, thus causing the formation of a twisting, and consequent strangulation. There was but slight peritoneal effusion, and the descending colon and rectum appeared natural. The patient had, on previous occasions, been subject to constipation. Mr. Busk, *15th of March*, 1847.

22.—Internal Strangulation from a similar cause.

A man, aged sixty-five, was admitted into St. George's Hospital in 1844, with a large, circumscribed tumour, occupying the greater part of the abdominal cavity, and apparently extending into the pelvis. The patient, who had been hemiplegic for twenty-

two years, could give no distinct history of his case; but, on examining the abdomen, fluctuation was distinguished over the whole of the tumour, the surface of which appeared to be smooth. No solid material could be detected in any part of it. Percussion gave a clear sound in the upper part of the abdomen only, and here but to a small extent. At the time of his admission there was a tendency to diarrhœa, and a day or two afterwards low peritonitis made its appearance, accompanied by great pain in the abdomen and constant sickness. He died on the third day after these symptoms had begun, having only been in the hospital five days. On laying open the abdomen, the greater part of it was found occupied by a large tumour, of a dark colour, which had displaced the various viscera, and even encroached upon the chest. This tumour was formed by the sigmoid flexure of the colon, enormously distended. The bowel was connected to the iliac fossa by a pedicle, formed by a long meso-colon, which had become twisted upon itself, and thus had given rise to partial obstruction of the gut, the openings leading into the descending colon and rectum being very small and tortuous. The cavity of this distended intestine was filled with fluid fæces, and one or two hard masses; its mucous membrane was of a dark livid colour, but not ulcerated. The other parts of the intestinal canal were quite healthy in structure; but extensive traces of low peritonitis were observed in various parts.

Mr. P. Hewett and Mr. Pollock, 15*th of March*, 1847.

23.—Intus-susception of the Ileum.

The specimen was taken from the body of a sailor, who, during a journey by railway, was observed suddenly to leave his seat and place himself on the floor of the carriage. His fellow-passengers, fancying he was ill or sleeping after drink, paid little attention to him, but on their arrival at the journey's end he was found dead. On post-mortem examination no disease was remarked in the head or chest. The abdomen presented evidences of severe peritonitis, and a fold of the ileum near its termination, six inches in length, was found to have sustained intus-susception, and was gangrenous.

Dr. R. Quain, 15*th of May*, 1847.

25.—Microscopic Observations on a variety of Nutmeg Liver,

illustrated by drawings. In this variety every lobule on those parts of its surface which form the sides of interlobular fissures has undergone, for some little depth in its interior, the fatty degeneration; while all the interior part, comprising about two-eighths of the whole lobule, remains in nearly its natural state. If a thin section be taken from a liver in this condition, it presents, when viewed under slight compression, by transmitted light, the appearance shewn in the drawing—viz., a dark zone, occupying solely the peripheral parts of the lobules, bounding distinctly the fissures by which they are separated, or indicating their situation when they are not disclosed by the section. Congestion in these instances is usually of the slighter kind,—the first stage of hepatic venous. It does not extend to the opaque margins of the lobules, which thus appear, by direct light, of a lighter tint than the central parts. The following explanation of the above fact may be suggested :—The cells of the liver, the acknowledged agents in the work of secretion, are known to be ranged very much in a radiating manner, forming long rows, which branch and communicate with adjacent ones. This disposition has appeared to obtain most perfectly in those livers which exhibit the least appearance of retained secretion, such as those of the rabbit and pig; while in specimens from the human subject, where the organ had been long congested, and the cells contained numerous particles of biliary matter, it has been more or less lost—the cells coalescing together in such a manner as to represent a plexus with small meshes. It seems, therefore, probable that the linear arrangement of the cells has some relation to the due discharge of the secretion. Dr. Jones had endeavoured to shew, that it is by the cells at the margins of the lobules, forming the terminations of the several radiating series, that the secreted matter is finally discharged. It appears to be transmitted from cell to cell until it reaches these, which, projecting at such times towards the fissure, burst, and yield up their contents, to be conveyed away by the minute efferent ducts. Thus, the secreting process appears to reach its termination in the marginal cells of the lobules, which

are often seen to contain more numerous or deeper tinged particles of secretion than those in the interior; and in these it is quite conceivable that the transmissive function may be especially liable to interruption—the centrifugal force by which the secretion makes its way outward failing as it were at this point, and thus an accumulation of oily matter taking place in the cells. How far this theoretical view may prove to be correct, further inquiry will probably shew. Its main idea is, however, probably well founded, and practically important, as it recognises, and in some degree explains, the great tendency of the liver to be affected with biliary congestion, or, in other words, undue detention of secreted material in its cells.

Dr. Handfield Jones, *15th of July*, 1847.

26.—Ulceration of the Gall-Bladder,

taken from the body of a lady, aged sixty-three, who had been seized, six or seven years before, with an acute attack which was regarded as hepatitis, and was treated accordingly. Since this attack, she had always been in a delicate state of health, suffering from occasional diarrhœa, slight pain, and sense of distention after eating. A second acute attack came on, on January 11th, marked by severe pain in the hepatic region, violent vomiting, cold surface, rapid and weak pulse, and constipation, followed by the formation of a circumscribed tumour below the cartilages of the ribs, towards the umbilicus, in the situation, in fact, of the gall-bladder. Under the influence of active treatment, the symptoms declined in intensity somewhat till the 17th, when bilious diarrhœa supervened, followed by copious discharge of blood by stool, and repeated vomiting of green fluid. She died comatose twelve days after the commencement of the attack.

In the post-mortem examination, made forty-two hours after death, the stomach was found to contain two ounces of greenish fluid, and presented at the large curvature several deep-red spots, from the effusion of blood. A similar congestion existed in the mucous membrane of the cæcum, colon, and lower part of ileum. The large intestines were distended with flatus, and some clots of blood were in the cæcum. The liver was small. On making a section of it, a thick, reddish, purulent-looking fluid escaped,

which could be traced into the portal system. The vena portæ contained a dark clot, extending into its smaller branches, and adhering to the lining membrane of the vein; some small red patches were observed in the inner membrane of the primary trunk. The gall-bladder had all its coats much thickened, and several small round ulcers of the mucous lining covered over by a thick layer of greenish mucus, and here and there an apparent effusion of lymph. Dr. Jenner, 1*st of February*, 1847.

27.—Large Pelvic Abscess with Abscess in the Liver.

The patient, aged twenty-three, a female, was admitted into the Fever Hospital, under Dr. Tweedie, on the tenth day of her illness, which lasted altogether forty days. Faintness, vomiting, and shivering, ushered in the disease. The most prominent symptoms on admission were, griping pain in the abdomen, coming on in paroxysms, with a coated tongue, and thirst. She was bled, and put under the influence of the mercury, the fœtor of which was observed on the fourteenth day, and on the sixteenth the shivering returned, and did not leave her till the day of her death. On the twenty-first day, vomiting of bilious matter came on, accompanied with tenderness over the region of the liver. Little or no alteration took place in the character of the symptoms from this period; there were daily repeated attacks of shivering, frequent bilious vomiting, a sallow skin, but no jaundice, a red and fissured tongue. She sank on the fortieth day, worn out by frequent vomiting. She died quite sensible. On post-mortem examination there was found one inch and a half of fat in the anterior walls of the abdomen. The omentum had formed adhesions at its lower border, to the adjacent surfaces of the uterus and the rectum, and in the space formed by these attachments there was a cavity filled with pus, which communicated with the rectum, by a fistulous opening in its anterior wall. There were also several smaller purulent collections. The right iliac artery, along the edge of the pelvis, was obliterated, and the ovaries had contracted adhesions with the omentum. The liver, which was pale and flabby, presented on the upper convex service of the right lobe, a circular elevation, an inch in diameter, and elevated half an inch. On making a section of the organ, through the centre

of this elevation in its antero-posterior diameter, numerous small cavities were laid open; the largest, corresponding with the elevation on the surface, was of sufficient magnitude to have contained a small walnut. The smaller cavities divided, were of irregular shape and size, all more or less connected with each other, so that the whole cut surface presented a ragged appearance, being riddled, as it were, by a chain of cavities. The walls of these cavities were lined by a flocculent lymph, in some parts deeply tinged with bile, and they contained fluid in the smaller ones, of the colour of pus, but in the large cavity, resembling mucus, being of very tenacious character, and capable of being drawn out in strings.

Beneath the microscope the fluid from the large cavity presented a confused granular appearance, with numerous organic globules, of various diameters, having irregular margins, and the majority obscurely resembled pus globules. Another portion of the less tenacious fluid exhibited pus globules of less equivocal appearance, but no positive conclusion could be drawn from even these. Imbedded in the slimy fluid were numerous seed-like bodies of a yellow colour: on placing these beneath the microscope, they exhibited acicular crystals, resembling cholesterine.

The morbid products were distinctly found to occupy the tracks of the portal canals, and in many parts of the organ the disease was entirely confined to the portal vein, the artery and the duct being easily distinguishable and perfectly sound; in no part were the duct or artery the only vessels involved, but in many positions they were included in the common destruction. The stomach, which was healthy, contained a greenish fluid; the small intestines, a liquid, pultaceous matter of a greenish-brown colour, and the large intestines, soft and pale fæces.

It appears probable that the pelvic abscess had existed for some time, and that peritonæal inflammation had gone on insidiously without producing serious disorder; she had enjoyed tolerable health for three months at least before she entered the hospital. It is difficult to fix the precise time when the disease of the liver originated, supposing it to have been subsequent to the pelvic mischief; bilious vomiting occurred twenty-one days before death, but was preceded by other symptoms much earlier,

Mr. Sankey, 1*st of March*, 1847.

28.—Fibrinous Deposits in the Spleen, in Cases of Diseased Heart.

The first specimen was taken from a woman, who had been under the care of Dr. Wilson, in St. George's Hospital, about three months. The mitral valve was much diseased, with almost entire destruction of the tendinous cords, and considerable contraction of the mitral orifice. The spleen was extremely large, and was pervaded throughout its substance by large fibrinous deposits.

The second case was taken from a patient who had been under the care of Dr. Bence Jones, for a rheumatic affection. The mitral and aortic valves were much diseased, and the spleen, which barely exceeded its normal dimensions, was pervaded with miliary deposits. Mr. Pollock, 1*st of March*, 1847.

29.—Hypertrophied Spleen, with Peculiar Disease of the Blood.

The spleen measured about fourteen inches in length, and four or five in depth. Its structure was extremely dense, exhibiting, on section, a beautiful mottled appearance; but under the microscope presented no obvious deviation from the normal character. It was taken from a strumous subject. The heart was quite healthy. A peculiarity of the case was the fluidity of the blood after death, and the presence in this fluid of a large number of granular, irregular, spheroidal bodies, twice or three times the size of the blood corpuscles. This was the second case that had come under the notice of Dr. Chambers, in which the post-mortem phenomena were analogous.

Dr. T. K. Chambers, 15*th of March*, 1847.

30.—Poisoning by Turpeth, or Turbith Mineral.

G. L——, aged sixteen, swallowed, on Tuesday night, Feb. 19th, at twenty minutes past twelve, two pennyworth of the mineral. It caused a burning sensation of the mouth and throat; and in about ten minutes he was very sick, and threw up the remnant of a hearty meal of tea and bread-and-butter, which he

had taken two hours previously. He now felt scalding pain in the throat, chest, and stomach; and this became so severe, that he walked to the London Hospital, where he was admitted under Dr. Frampton. He vomited repeatedly on the road, and was faint and weak. He was admitted at a quarter past one o'clock, and then looked pale, with an anxious countenance, felt cold, and complained of sickness, with great pain in the throat and stomach. Sulphate of zinc, followed by mucilaginous drinks, having been given, he went to bed, and was seen again in half an hour, when he was suffering from great pain in the stomach and œsophagus, and had constant sickness, and a sense of heat and constriction in the throat. He passed a sleepless night, being tormented by pains and cramps in the limbs, and constant purging and vomiting. In the morning he was in a high state of fever; the throat and stomach were still painful, the latter somewhat tender on pressure, and so irritable that nothing would remain on it an instant; the tongue and inside of mouth red and inflamed, feeling, as he said, "raw;" the bowels were much relaxed. Leeches were applied to the epigastrium, and mucilaginous drinks, with opium and henbane, were given, without allaying the irritability of the stomach. On Thursday the purging had ceased, but he still complained of his throat; the breath also began to acquire the mercurial fœtor, and he spat more than usual. From this time he became weaker and weaker; nothing would remain on his stomach; his mouth and throat continued exceedingly painful, and he became profusely salivated, the gums acquiring a deep bluish tint, and beginning to ulcerate at the margins. This condition increased, but he never lost his senses, or became in any way comatose. The debility increasing, he died at eight o'clock upon the following Tuesday morning, without any convulsion or struggle, nearly one week after the administration of the poison.

Post-mortem examination twenty-seven hours after death.—The body was stiff, well developed, and rather pale, except at the dependent parts, where it was livid from the gravitation of the fluid blood; the countenance was composed, the parotid and sub-maxillary regions rather swollen; the lips had a pale-bluish colour, and the gums looked purple and ulcerated at the edges. On opening the chest, the lungs did not collapse, but were so gorged

with blood as to be quite black at the dependent parts; a few old pleuritic adhesions bound them to the costal pleuræ. The heart was slightly enlarged; it was immensely distended on the right side with black fluid blood; on the left it was nearly empty. The abdominal viscera were rather redder than natural, and shewed the meanderings of numerous vessels filled with dark blood; the ascending and transverse colon were of a deep leaden colour, and the intestines were contracted throughout their whole course; the œsophagus, from the mouth downwards, was much inflamed, and for about four inches before it joined the stomach, its mucous coat had become opaque white, and was pealing off in long strips. The stomach contained nearly a pint of dark yellowish-brown fluid; it was not much contracted; its internal surface, especially about the cardia and pylorus, was covered with patches of small petechial spots, as seen in the model, very similar to those arising from the action of arsenic; elsewhere it had acquired a dirty yellowish-green tint, from the presence of much bile. The intestines throughout their course were contracted and nearly empty, the little which they did contain looked like bile and thick mucus; the internal coat was everywhere redder than natural, and towards the lower part of the ilium it was covered by numerous isolated petechial spots, of about the size of a hemp-seed; this condition was also very evident in the cæcum, and along the whole course of the large intestines; the mucous coat was not anywhere abraded or ulcerated. The liver was enlarged and much congested with dark blood; the gall-bladder was full of bile, the pancreas hard and enlarged, the spleen and kidneys of a deep purple colour, and the bladder empty and quite contracted. The vessels on the surface of the brain were full of black fluid blood; on section there were more bleeding points than natural; the cortical substance looked bluer than usual, but its consistence was normal. Portions of the intestines when broken down by nitro-muriatic acid, afforded distinct evidence of mercury. There was no opportunity of examining any of the urine or saliva which was secreted in such abundance before death.

Remarks.—Turbith mineral is a subsulphate of the binoxide of mercury, and, like the other persalts of this metal, is a violent poison. It is, however, so rarely used either in medicine or in

the arts, that there is no report of any case of poisoning by it since the time of Wibner.

In the present instance, one drachm of the poison had been taken. The effects which followed were very similar to those which result from the action of corrosive sublimate. The poison did not appear to exert any influence over the sensorial functions, but it rather seemed to exhaust the organic acts, and, perhaps, to have given rise to a state of atonic pneumonia.

Among the post-mortem appearances, the most striking were, the leaden blue tint of the lips and gums; the ragged, ulcerated condition of the latter; the swollen state of the salivary glands; the alimentary canal, too, from the mouth to the anus, was found to be redder than natural, and studded with livid petechial spots —a condition most manifest from the cæcum downwards. Then, again, it is worthy of remark that the intestines were contracted throughout, and nearly empty, and that the colon had acquired a slate or lead colour. The gorged and uncollapsed lungs, together with the distended condition of the right side of the heart, and the emptiness of the left, pointed to the fact that death had begun its work at the respiratory organs. This was further evidenced by the turgid condition of the whole venous system, and by the black uncoagulated state of the blood everywhere. In this case, there were many points of resemblance to the effects produced by the preparations of lead, especially as regards the blue colour of the gums, and the purplish hue of the large intestines; but there were also other points of marked distinction, as in the ulcerated state of the gums, and the universally contracted condition of the intestines and bladder.

Case read by Mr. N. Ward for Dr. Letheby,
1*st of March*, 1847.

31.—Poisoning and Death from Arsenious Acid.

Harriet T——, aged nineteen, a robust healthy girl, took, on Tuesday night, Sept. 1st, about two ounces of fly-water containing two grains and a half of white arsenic. It rendered her somewhat restless during the night, producing watchfulness, and a slight pain in the stomach. In the morning, she became sick, and complained of great thirst; the pain of the stomach

also had become much more intense. In the course of the day the sickness increased, and she was repeatedly purged, her countenance looked pinched, and the extremities became cold. From this state, however, she soon rallied, and on Wednesday night she became cheerful, and slept comfortably, though she was disturbed once or twice by the thirst which still distressed her. On Thursday morning she was worse, being cold and drowsy. Her mother now sent her off to the hospital, but it was found to be too late for medical help; she was evidently in a dying state: the countenance was pale and anxious, the extremities cold, and bedewed with a clammy perspiration; the pulse was hardly perceptible, and she lay in a state of incipient coma. When roused, she spoke of what she had done, and seemed conscious of her danger. From this time, (nine o'clock,) she became more and more comatose, and at twelve she gradually sank, dying about thirty-six hours after the administration of the poison.

The body was examined twenty-one hours after death.—The *brain* was found to be very much congested, and the lateral ventricles filled with half-coagulated blood. The *lungs* were natural; the *heart* flabby, and distended with dark jelly-like blood. On the endocardial membrane, especially where it covered the auriculo-ventricular valves, there appeared a number of hæmorrhagic spots: this was illustrated by the drawing. The abdominal viscera were somewhat congested, particularly towards the region of the pelvis. The *stomach* was pale, nearly empty, and its mucous coat raised by a number of vesicles containing air. Along the pylorus it had acquired a distinct gamboge tint—an effect which was in all probability due to the formation of a sulphuret of arsenic. The tissue of the stomach was examined chemically, and it gave unequivocal evidence of the presence of arsenic in it.

Without commenting on this case, a few points which may be of some interest to the medical jurist may be referred to:—

1st. That two grains and a half of arsenious acid should be sufficient to cause death. I believe that this is the smallest fatal dose on record.

2nd. That the operation of the poison should have been so slow; for the fatal symptoms did not appear for more than twenty-four hours after its administration.

3rd. The local symptoms were very slight; death appeared to result from coma, coagulated blood being found within the cavities of the ventricles.

4th. The ecchymoses on the valves of the heart, mentioned by some authors were here very evident.

5th. The congested state of the pelvic viscera was another point of interest.

6th. An analysis of the tissues of the stomach yielded distinct evidence of the poison, notwithstanding the smallness of the dose taken.

7th. This was further evidenced by the yellowness of its mucous coat, and it was peculiar that the sulphuret should have been so soon formed. *Case read by* Mr. N. Ward *for* Dr. Lethieby, *21st of December*, 1846.

32.—Stomachs of Four Persons Poisoned by Arsenic.

The stomachs of all four, as well as those of two other persons poisoned at the same time, but which were not exhibited, presented marks of inflammation, in the form of a rosy-coloured arborescent injection; this injection was more marked in some cases than in others: it was most intense in the stomach of the man who survived twenty-two hours, and in that of a boy who survived four hours, being the longest and the shortest periods of life after swallowing the poison. The duodenum was inflamed in five cases—in three intensely. The œsophagus, of four cases in which it was examined, shewed no mark of irritation. The jejunum was intensely injected in one case, slightly so in the rest. The ileum was especially injected in two cases at its termination. The colon was inflamed in patches either at the commencement or termination. The rectum was much inflamed in the case of the man who lived longest; slightly so in a child which survived five hours and a half. In the rest the rectum was natural in appearance. The condition of the blood in the heart was variable; in one there were distinct fibrinous concretions, in others loosely coagulated blood; in two the blood in the heart was of tarry-black character. The blood generally throughout the body was thin and fluid.

The kidneys shewed signs of congestion in most of the cases;

the bladder was empty. The other organs exhibited nothing remarkable. In one case only, that of the man, there were found numerous petechiæ, or spots of extravasated blood, under the lining membrane of the left ventricle.

The mucous glands of the stomach were found enlarged in most cases. In one, that of a child one year and five months old, which survived seven hours, the glands were raised in oblong patches along the whole tract of the small intestines. It is doubtful whether the appearance was, in this last case, attributable to the poison. It must be observed that sulphate of zinc had been administered as a remedy, and all the patients had vomited, and had been freely purged.

Dr. R. Barnes, *7th of June*, 1847.

33.—Poisoning by Sulphuric Acid.

Case I.—On Monday, Dec. 29th, 1845, a boy, aged nine, was admitted into the London Hospital, under Dr. Little, suffering from the effects of oil of vitriol. He was at play in the street, when a strange boy gave him a teaspoonful of it to drink; he swallowed about an ounce of the acid, and was instantly seized with excruciating pains in his throat and stomach. He ran home, and, according to the father's account, looked as if somebody had been smearing his lips with white paint. He was carried as quickly as possible to a neighbouring surgeon, who administered a great quantity of chalk and magnesia; five minutes, however, must have elapsed before anything was done. His father then brought him to the hospital, and he became very sick, throwing up a quantity of brownish matter, from which the chalk readily subsided, leaving a supernatant liquor, strongly resembling porter; it was chiefly mucus, charred by the sulphuric acid. He appeared to be suffering a great deal, the countenance was anxious and deadly pale, the extremities cold, and the pulse scarcely perceptible. Under active treatment he rallied, and in about seven hours fell into a quiet sleep; he passed a very comfortable night, and got out of bed twice to void his urine. In the morning, the countenance still looked anxious; he complained of pain in his throat and stomach, though it was not increased by pressure; the lips were swollen, and surrounded by reddish-brown

scabs, the effects of the acid; the tongue also was covered with a pearly-white epithelium, which had already begun to peel off from its sides, (as illustrated in the drawings;) the skin was hot and dry; the pulse 132, hard, and jerking. He was ordered albuminous food, and two leeches were applied over the top of the sternum. This febrile condition lasted for four days, the skin remaining hot and dry, and the pulse quick and jerking: during this time he was copiously salivated, and he spat up a great deal of white, shreddy epithelium; the urine was high-coloured and increased in quantity, while the bowels remained obstinately constipated. On the fifth day, an active purgative relieved them, and from that time he gradually got well. The urine which he voided during the first four days of his illness was submitted to chemical analysis. Its quantity was greater than natural, it had a deep-red colour, a strong acid reaction, and a specific gravity varying from 1046 to 1030; it did not contain the least trace of albumen, but held so much of the triple phosphates in solution, that, on neutralizing with ammonia, they were thrown down in the form of a copious white precipitate. On testing for sulphuric acid, there was found, on the first day, a quantity equal to sixty-two grains of the strongest oil of vitriol; on the second day, forty grains; on the third day, 18·3 grains; and on the fourth, the equivalent of 12·7 grains. The urine was not examined on the following day, but on the sixth it had again become natural. In all, therefore, 133 grains of monohydrated sulphuric acid were thus got rid of—a quantity which is about equal to an ounce and three-quarters of the dilute acid of the London pharmacopœia.

The case offers the following peculiarities:—

1. That he should have recovered after the poison had remained so long on the stomach.

2. Its detection in the urine shews that the acid had been absorbed.

3. Its action was almost entirely local, the only constitutional symptoms being a little fever with copious diuresis.

4. That the duty of getting rid of the poison rested with the kidneys.

5. That as much as, or rather the equivalent of, 133 grains of the strongest oil of vitriol should be permitted to circulate with

the blood of a child nine years old without producing any very dangerous consequences.

Mr. N. Ward for Dr. Lethieby, 21*st of December*, 1846.

DISEASES OF THE URINO-GENITAL SYSTEM.

2.—Stricture of the Urethra, with Hypertrophied Bladder and Diseased Kidneys.

The left kidney was three or four times larger than the right. The pelvis was distended with puriform fluid, and small depôts of pus were contained both within the cortical and tubular portions of the organ. Pus might be pressed from the papillæ. The right kidney was about one-third the natural size, and was also filled with puriform fluid; it presented little cortical or tubular structure. Both ureters were also greatly distended. The bladder was contracted, and its parietes exceedingly thickened; it contained a little purulent urine; its mucous membrane was red, and in patches ecchymosed and rugous. The membraneous portion of urethra was distended, and the surface of the mucous membrane was covered with puriform lymph not easily detached. In front of this the calibre of the urethra was so much contracted as only to admit the entrance of a very fine probe. This constriction was half an inch in length, and the tissues forming it were of cartilaginous firmness. The urethra in front of the stricture appeared natural. The specimen was taken from a man aged twenty-eight, who had suffered from stricture for five or six years. While in Guy's Hospital, under Mr. Morgan, he had dribbling of the urine, and great pain over the pubis, with distension of the bladder. The urine was alkaline, and loaded with puriform mucus. No instrument could be passed, and from the extensive disease of the bladder and kidneys it was deemed inexpedient to open the bladder. He sank on the twelfth day after admission.

Mr. J. Birkett, 19*th of April*, 1847.

4.—Abscess of the Kidney.

The organ presented a mere collection of pouches filled with pus, the glandular structure having apparently undergone entire disor-

ganization. Each pouch contained a secondary cyst, with similar purulent fluid. The pelvis was not much dilated.

The specimen was taken from a female, aged sixteen, who died hectic, and was affected six months before death with considerable purulent deposit in the urine. The cause of the disease was not evident. That it did not arise from impediment to the flow of urine was proved by the pervious condition of the ureter, which, however, was destitute of its lining membrane.

Mr. Busk, *15th of March*, 1847.

5.—Kidney affected with Tuberculous Deposit.

This organ was removed from a man, aged fifty-two, admitted into the Dreadnought, suffering from bronchitis. There was no apparent affection of the kidneys or the liver. The patient died in a few days.

On post-mortem inspection, miliary tubercles were found to pervade both lungs, which also presented evidence of extensive bronchitis. The left kidney contained a large quantity of serous cysts; its ureter was ten times the ordinary size, and, at its entrance into the bladder, was almost occluded, admitting only a bristle. The right kidney was studded with small white points, consisting, most probably, of tubercular matter. The bladder presented one or two superficial ulcers. In connexion with the liver there was a large cyst containing hydatids, some of which were very large, others not greater than a pin's head.

Mr. Busk, *7th of December*, 1846.

6.—Peculiar Disease of the Kidneys.

The subject of this disease was a child aged one year and a half, who died from double pneumonia. The urine during life was albuminous. On post-mortem inspection the surface of both kidneys were observed to have been highly inflamed, there being immediately beneath the proper covering much purulent effusion, and the cortical structure itself being interruptedly sloughy and gangrenous, with numerous circumscribed depositions of scrofulous pus. There was neither disease of the bladder, nor obstruction of the ureter. Dr. Lloyd, *1st of February*, 1847.

7.—Medullary Sarcoma of the Kidneys.

The subject of this case was the only child of young parents, born apparently healthy, and continued so until its seventh month, when scrotal hernia presented on the right side. The following month a hard swelling, the size of an egg, was felt in the anterior part of the left lumbar region, which rapidly increased, in a few days attaining the size of a small melon. No definite opinion being given of its character, he was visited by Sir James Clarke, who also was unable to decide either on its structure, or from what organ it had its origin, all the functions and secretions being apparently undisturbed. The rapid growth of the tumour suggested the probability of its being some form of malignant disease. Shortly afterwards a fulness was observed in the right hypochondriac region, caused by a similar tumour under the liver. In the course of three or four months the swellings had gradually increased until they attained a most enormous size, filling the abdomen, pressing back into the lumbar regions, and so distending the abdominal parietes, that they required the application of oil to promote their relaxation from the enormous pressure within; the tumours coalesced till they presented no definite boundaries; the distension was too great to allow of the child being placed in any other position than on its face. It lingered in this state until the thirteenth month, when it died exhausted, the body generally being extremely emaciated, and the abdomen enormously distended. Occasional constipation and vomiting were the only distressing symptoms. The abdomen was the only cavity examined after death: its contents were pale and attenuated; the intestines were displaced by two large, globular swellings, filling each side of this cavity, which proved to be the kidneys converted into cancerous structure, the right weighing two pounds twelve ounces, the left two pounds four ounces; conjointly, therefore, five pounds. Their external surface was smooth, the fibrous covering not being diseased; internally they were of an encephaloid structure, the several tissues of the organs being transformed into brain-like substance, but of firmer consistence; they had lost all resemblance to the ordinary structure of the kidneys, not even the pelvis or infundibulæ being distinguishable; the left was lobulated, as in the

fœtal state, and retained somewhat of its normal form; the other was entirely altered. The disease of the kidneys not having been suspected, the urine was not chemically examined during life After death the bladder contained a little secretion, but only sufficient to detect its constituents, being largely impregnated with alkaline matter. Mr. Obre, *15th of February*, 1847.

8.—Microscopical Examination of the same Kidneys.

The kidneys on minute examination were found to consist of a new structure, and the proper secreting tissue in a morbid state. The new structure was formed of a fibrous stroma, the fibres being ill-defined and parallel with each other; of nucleated cells two or three times the size of the blood discs, oval, spindle-shaped, caudate, and doubly caudate; of bloodvessels and numerous corpuscles.

The proper structure of the organ could only be examined at the cones, owing to the cortical portion having undergone complete degeneration. In the cones scarcely any of the uriniferous tubes had a natural appearance, many being destroyed. Several were increased in size, and lined with numerous cells, in some degree retaining the normal arrangement. A still greater number of the tubes were atrophied, and contained irregularly formed cells and granules, and were surrounded by the morbid structure.

The disease was, in all probability, medullary cancer, which commenced by the infiltration of morbid matter, external to the proper secreting apparatus. The circumstance of the organ having retained its functions, considering its almost entire degeneration, was a point of great interest.

Dr. Quain, *1st of March*, 1847.

9.—Tubercular Disease and Abscess of the Kidney.

The substance of the organ was atrophied, from the pressure of the thickened and dilated calyces. The cones could not be traced, and at the upper part the remains of the cortical and tubular substance together formed a layer one-eighth of an inch in thickness, extended over the dilated calyces, and sending in septa between them. In the less compressed portions, patches of tubercular mat-

ter were studded about, some slightly projecting from the surface, some embedded in the interior. In some places they were softened, and presented only amorphous granular matter, without any trace of structure. Other spots retained considerable consistence, and shewed the tubuli uriniferi choked up by tubercular matter. From one of these latter patches a small portion of tissue was removed, and broken down by pressure between two plates of glass. On examination under the microscope, the field was found to be strewn about with hundreds of cylindrical casts from the tubuli, composed of obscurely granular matter, with a considerable proportion of oil. These casts seemed to have been liberated by the laceration of the basement membrane of the tubes. In this example, as in all the other points of tubercular infiltration, the epithelium cells of the tubes, and their nuclei, could not be detected.

The principal seat of the disease, however, was in the calyces and pelvis of the kidney, and in the ureter. The mucous membrane of these parts had lost its smooth aspect, and presented instead a rough irregular surface, which was caused by a layer of amorphous granular matter, easily scraped off.

Beneath this was the sub-mucous cellular tissue, two or three lines in thickness, infiltrated with granular matter: it had a firm white section, and did not collapse when cut through. The calyces being dilated from the presence of the urine which the intercepted ureter caused to accumulate in their interior, had expanded between and compressed the cones of the kidney, and extended from the fissure almost to the convex surface.

Both the fibrous and sub-mucous coats of the ureter were much thickened; it felt like a solid cord and its calibre was lessened, but not completely obliterated.

In the bladder were numerous small circular ulcers, pale and smooth, more abundant on the same side as the diseased ureter, some of the cheesy morbid matter from which was found in the cavity of the bladder.

The prostatic portion of the urethra was also the seat of superficial ulceration, and the verumontanum was excavated, as if by a small abscess. Small points of softened tubercle were also found in the substance of the prostate, and in its cellular coat. The vasa deferentia, vesiculæ seminales and testicles were healthy.

Both lungs were thickly studded with grey tubercle, not softened in any part.

The joint between the metatarsal bone of the great toe and internal cuneiform bone was diseased. The ligaments and capsule were infiltrated with softened tubercular matter, and external to the capsule were rounded semi-transparent masses of unsoftened tubercle.

The bones were not carious, nor occupied by tubercular matter; but the cartilages were worn quite thin, and in some places almost destroyed.

Tubercular matter in a softened state was deposited between the periosteum and bone, on the spine of the tibia, and on the internal condyle of the right humerus. These parts had presented painful soft nodes during life. A thin lamina of new bone had been thrown out. The cancellated structure remained quite healthy.

The lumbar glands were affected by tubercular deposit.

The disease was stated to have commenced six years before death, with attacks of lumbar pain and irritable bladder, occurring at intervals of four or five weeks. He was first under care at the Dreadnought a year before, when the symptoms were very urgent, and appeared referable to calculus in the right kidney, but gave way under rest and antiphlogistic treatment. He was readmitted in January, 1847, for syphilitic pains and disease of the tarsus. He had at that time no remains of his former symptoms, and during the three and a half months in which he remained in the hospital there was nothing to attract attention to the urinary organs. In March he began to exhibit signs of tuberculous deposit in the lungs, and he sank in five weeks.

Mr. Hudson, *15th of May*, 1847.

10.—Kidneys affected with one form of Bright's Disease.

These organs were removed from a man who had been the subject of a very serious and fatal form of albuminuria, in which the urine became almost solid by heat, and there was a continual tendency to a peculiar ochreous diarrhœa. The kidneys were large, weighing eleven ounces each; the cortical substance was of a uniform pale buff colour, devoid of granular irregularities, and exhibiting under the microscope an accumulation of large granular

cells, with an unusual predominance of oil globules. This was believed to be a rather uncommon variety of Bright's disease, unattended with contraction, on account of the predominance of fatty matter. Dr. C. J. B. Williams, *2nd of November*, 1846.

11.—Microscopical and Chemical Examination of these Kidneys.

On examining sections under the microscope, there were seen many opaque dark patches, which, on a hasty examination, appeared to be confused masses of granules and globules. On a more careful examination of very thin sections, these patches were found to consist of convoluted urinary tubes, filled, distended, and, in many cases, ruptured by an accumulation of globules in their interior. Several of these sections were digested for some hours in ether, and again submitted to a microscopical examination, when it was found that the globules had entirely disappeared; and the patches, previously opaque and dark, had now become transparent and clear. One hundred grains of this kidney were dried over a vapour-bath: the dried residue weighed thirty-one grains and a half. This was digested in ether, on evaporation of which, $3\frac{2}{10}$ grains of fatty matter remained.

There was no other deposit or accumulation in the kidney. There were no products of inflammation in those portions of the gland which contained no oil; some of the tubes appeared quite healthy, while others seemed to be shrunk and atrophied, probably in consequence of the destructive pressure which the dilated urinary tubes had exerted upon the surrounding bloodvessels.

Dr. George Johnson, *10th of November*, 1846.

12.—Peculiar form of Granular Kidney.

The kidney weighed eight ounces, the surface was of a claret tint, and largely granulated, the texture presenting a peculiar mottled appearance, particularly evident at the outer part. It was taken from a boy, aged nineteen years, who was, to all appearance, in perfect health four or five days before he died. The symptoms preceding death were, entire suppression of urine, hæmorrhages from the nose and bowels, and, lastly, coma; there was no dropsy. Examined by the microscope, the kidney presented in its tubes

detached epithelium, but no oily or albuminous matter; the urine was not examined. Mr. Busk, *2nd of November*, 1846.

13.—A Specimen of Diseased Kidney from a Cat.

The following was the history of the case:—The animal had for some days been inactive and drowsy; she was then seized with convulsions, followed by coma and death. There was no opportunity of examining the urine. The kidneys were about twice the normal size, much congested, and presented to the naked eye an abundant yellowish white deposit in the cortical substance. Under the microscope, the urinary tubes were seen to be uniformly and greatly distended with oil globules. Microscopical examination of fatty degeneration of the kidneys from this class of animals, was very easy and satisfactory, on account of the delicacy and transparency of the tissues.

The bloodvessels of the kidney probably were much congested, in consequence of the compression to which they were subjected by the dilated urinary tubes; from the same cause, some of the Malpighian vessels had given way, and the tubes had become filled with blood. The healthy cat's kidney contained a minute quantity of oil, but infinitely less than in the disease in question.

Dr. George Johnson, 18*th of January*, 1847.

14.—Granular Kidney,

taken from a patient who came under the care of Dr. Addison, in Guy's Hospital, in February. He had, on admission, swollen legs and abdomen, puffy face, and dropsical conjunctiva, accompanied with much bronchial obstruction; the heart apparently healthy; the urine of specific gravity 1012, densely coagulable, about two and a half pints being passed in the twenty-four hours. For the space of a month the case took the ordinary course of Bright's disease, the amount and character of the urine being much as on admission. At the end of this period a severe attack of rigors supervened, together with much febrile excitement, and great dyspnœa; and the amount of urine diminished to one pint in the twenty-four hours, and contained the lithates in abundance, being densely coagulable. He rallied somewhat from the attack under treatment; but, a second attack of rigors coming on nine

days afterwards, with aggravation of all the symptoms, he died asphyxiated. Old pleuritic adhesions were observed on both sides of chest. The lungs were emphysematous, the bronchi and their divisions being much dilated; there was slight atheromatous deposit in the arch of the aorta; the kidneys were enormously large and white; the capsule stripped off with undue ease, leaving the surface smooth, and in some parts stellated with closely aggregated white spots,—which seemed to consist of interstitial deposits, while in others there were large contracted spots of a deep purple colour; the general appearance was very beautiful, and not unlike, in the recent specimen, to a piece of variegated marble; the pelvis of the organ was considerably dilated; the mouth of the renal artery was patulous, and unyielding to the touch. On examining the renal vein, it was found filled with a firm fibrinous coagulum, and this unusual condition was found to extend to its ultimate ramifications. Under the microscope the white interstitial deposits were found to consist principally of fat, while evidence was afforded of the inflammatory origin of the coagula in the veins. In the abdomen about a pint of muddy serum was found effused. In the venous system generally no disease was discovered. Dr. Barlow, *5th of April*, 1847.

16.—Oxalate of Lime Calculus in the Bladder, with enlarged Prostate.

The patient, aged sixty-two, tall and spare, and temperate in his habits, had restricted himself for years to a vegetable diet, eating large quantities of apples, pears, and oranges, and drinking only water. In 1840, symptoms of irritable bladder set in, which subsided under treatment till 1842, when they returned, accompanied by severe eczema and symptoms of heart-disease, together with dyspepsia. An attack of erysipelas came on in the leg in the following year. In 1845, bronchitis supervened, and the irritability of the bladder increased, which, at the end of the year, subsided under treatment. From January to May he could walk some miles without inconvenience, and occasionally rode in an omnibus, the symptoms at no period being so severe as to lead to the idea of the presence of a calculus. He died comatose at the end of May, the chest affection having rapidly increased. The

result of extensive bronchitis was found after death, together with pleuritic effusion. The heart was generally hypertrophied and dilated, with disease of the aortic and mitral valves. The kidneys had a granular aspect, and the bladder was hypertrophied. The third lobe of the prostate was much enlarged, and on its left side was a depression, in which was lodged the calculus. The lateral lobes were about half as large again as their natural size The urine removed had a specific gravity of 1030, was acid, and contained albumen. No oxalates were found. The calculus weighed 330 grains, and was very rugged and rough on the surface; the following analysis of it was made by Mr. Marshall :—

Water	5·0
Oxalate of Lime	81·5
Urates of Lime and Ammonia	5·
Uric Acid	·85
Phosphate of Lime	1·65
Animal and colouring matter	3·3

The circumstance of the patient being capable of walking five or six miles without inconvenience, illustrated the remark of Sir Benjamin Brodie, that an enlarged prostate by preventing the stone from falling on the neck of the bladder causes considerable diminution in the sufferings of the individual.

Mr. Jay, *5th of April*, 1847.

17.—Several Specimens of Cystine exhibited,

with the particulars of two cases in which this deposit occurred in the urine.

The first case occurred in a policeman, a patient of Mr. Childs, aged thirty-three, a native of Ely, who had suffered twenty-years before from a nine months' attack of ague.

He had frequently noticed a deposit of gravel in his urine, after exposure to cold, but always of a red colour. About three years and a half since, he accidentally injured himself in the perinæum, which part continued to swell and become painful, for about a month, when an abscess burst externally, and also into the urethra; it healed in about six weeks; but, since that time, pus had been formed, and the abscess opened three times.

About a year and a half since, he had a violent attack of pain in

the back, with vomiting, &c.; soon after, several small calculi passed, and he became relieved. About three months since, the pain in the back returned, and soon after, a much larger calculus passed, together with many small ones; he has since continued, at times, to pass small stones. The urine also contained a matter which causes a deposit after standing a short time.

He was a robust-looking man, and appeared at first sight, in perfect health, but suffered from dyspepsia, the tongue always having a white fur: he was thirsty; the lips were dry and cracked; he had frequently an acid taste in the mouth; the appetite was pretty good, except when he had the sensation of nausea which preceded the passage of calculi; the bowels were regular; the skin moist; there was often a papular eruption about the face and neck; the perspiration was sometimes very sour; no disease could be detected in the heart, lungs, liver, or spleen. His father had occasionally passed red gravel; his mother, still living, is not subject to any such affection.

This patient's urine generally gives rise to a deposit which has a whitish appearance, not unlike that produced by a highly refracting crystalline body, as cholesterine, when floating in a fluid; this precipitate does not disappear when the urine is heated, nor when acetic acid is added, but alkalies and the mineral acids both dissolve it. Under the microscope, the deposit appears in the form of six-sided laminæ; these have frequently a tendency to aggregate, not to form rosettes, as described by some, but the crystals are arranged at right angles to each other. When separated from the deposit, the urine had a pale yellow colour, an acid reaction, which soon disappeared, and it became alkaline, with the formation of crystals of triple phosphate of ammonia and magnesia, which appeared on the surface and sides as a film. The odour was strong, but not very peculiar. Specific gravity 1014 at 60 F. It did not give a black precipitate with sub-acetate of lead, so that it contained no alkaline sulphuret. The addition of acetic acid did not cause the further precipitation of crystals of cystine. 1000 parts gave, on analysis, after separating mucus and cystine:—

Water	969·009
Solid Matters	10·993
Urea	10·125

Uric Acid	0·375
Extracted Matters, Ammoniacal Salts, &c. .	13·059
Fixed Salts	7·432
Soluble in Water . . .	5·995
Insoluble in ditto	1·437

When the urine was kept, it soon became ammoniacal, and also a large quantity of an alkaline sulphuret was found in it, which caused it to precipitate the salts of lead black, and also to evolve sulphuretted hydrogen in abundance when an acid was added. At the same time, a green conferva was found in the fluid on its first becoming alkaline. This urine contained much more unoxidized sulphur than ordinary urine, most probably in the form of dissolved cystine. Healthy urine, however, always contains such a body; and it is possible that cystine is found in very minute quantities in health, but not in sufficient quantities to cause it to appear in a crystalline form. The quantity of urine passed in twenty-four hours was fifty-four fluid ounces; the quantity of uric acid, in the same time, about nine grains. The calculi passed by this patient consisted of pure cystine; on the surface they have a beautiful crystalline appearance, very much resembling crystallized raw sugar.

In the next case the patient was a young man of fair complexion and scrofulous habit, aged twenty-three. One sister died lately of phthisis; his grandfather suffered from calculus, and his father also from some form of renal disease.

This patient, about a year since, had symptoms of dyspepsia. This was removed in a few days by an alterative and tonic plan of treatment. About six months after, he passed a small calculus, about the size of a pea, consisting of pure cystine, (No. 2,) having, for some days previously, suffered much from pains in the lumbar region. There was considerable pain when the calculus was passing the urethra. Lately, he has had another attack, and passed another small calculus. This patient has noticed that his urine has frequently a peculiarly sweet odour.

It was remarked that in both these cases there were symptoms of dyspepsia which have been noticed by other observers; and in addition to this, in the first case above mentioned—disease in the urinary passages. The dyspepsia, in both these cases, was no

doubt primary, but at times aggravated by the sympathy of the stomach with the kidneys. The cases have been brought before the Society more on account of the rarity of the occurrence of cystine, either in the form of a calculus or deposit in the urine, than from any particular novelty. Dr. Garrod, *3rd of May*, 1847.

18.—Microscopical Preparations of Certain Concretions of Frequent Occurrence in the Prostate Gland.

These bodies, which have been alluded to by Cruvelhier and Prout, occur in great numbers in the cavities of the gland: in some instances, highly developed and of a deep yellow or red colour: in others, extremely small, pale, and colourless, and indistinguishable from the tissue in which they are embedded. They originate in a large oval vesicle, having a single wall of homogeneous membrane, the cavity occupied by a colourless, finely-mottled substance, in the centre of which a nuclear corpuscle sometimes occurs. The mean diameter is about $\frac{1}{1000}$ inch. In some of larger size, the envelope is still seen, but the contained amorphous matter is beginning to be arranged in layers concentric to the envelope. In the further stage, the vesicles measure $\frac{1}{200}$ inch or more, shewing concentric layers, which may be more developed on one side than the other, like so many repetitions of the original envelope, the intervals between the layers being occupied by a finely-mottled deep yellow or red substance. There is a central cavity, corresponding with the external contour in its form, which is triangular, with rounded angles or quadrilateral. From this normal appearance these bodies present numerous variations in form and internal arrangement, and appear to occupy an intermediate position between organic growths and inorganic concretions: to the former, by their vesicular origin, and by their growth, which chiefly appears to take place by the dilatation of the vesicle and successive depositions in its interior; to the latter, by their shape, their tendency to become infiltrated with earthy matter, and to pass into the condition of a dead amorphous mass of a deep yellow red, even almost black. The chemical composition of these concretions varies, probably, with their different stages of development; at first, consisting of little else but animal matter, then acquiring, especially when in a state

of degeneration, calcareous salts, stated by Dr. Prout to be phosphate with a little carbonate of lime. The colouring matter is unaffected by ether, liquor potassæ, and muriatic acid.

Dr. H. Jones, *7th of January*, 1847.

DISEASES OF UTERUS AND OVARIES.

1.—Mature Fœtus retained in the Cavity of the Uterus.

The subject of this case was a female aged forty-one, who was pregnant, and expected to be confined in June, 1845, at which time a gush of blood from the womb, with some pain, took place; but without any further sign of labour. The breasts became distended with milk. Ergot of rye, galvanism, and some attempts at artificial dilatation, were in vain had recourse to, to excite the paralyzed uterus. The fœtus decomposed, and a great many of its bones were removed through the os uteri. The patient died three months after the time she had missed her labour. A preparation of the parts was exhibited. The uterus was contracted, and the anterior wall of its body was almost entirely absorbed. The remainder of the fœtal bones, closely packed into an ovoid mass, were found in a cyst; bounded in front by the abdominal walls and urinary bladder; above, by omentum and small intestine, held together by false membrane; and behind and below, by the posterior wall of the womb, and the cervix and os uteri. The bladder was thinning at one part, as though some of the fœtal bones would have passed through it.

Dr. Oldham, 20*th of October*, 1846.

2.—Rupture of the Uterus.

The subject of this case was twenty-eight years of age, and had given birth to four children at three confinements, the first being a twin-labour, both the children were males, and in both there was an arrest of development of the sexual organs. Although in the daily expectation of her confinement, she had busied herself about her domestic concerns, and at eleven A.M. on the Friday, she expressed herself as feeling very tight, and thought she should be confined towards evening. Soon after three o'clock she felt a violent fœtal movement, followed by pain and a sensation

of faintness. She was seen at half-past three, and found sitting in a chair, supported by an attendant, gasping for breath, her face pallid, somewhat livid, nostrils dilated, eyes staring, a cold, clammy perspiration bedewing the body, and her pulse scarcely perceptible. A vaginal examination found the os uteri closed. She rallied under the administration of stimulants, and at eight P.M. a second vaginal examination detected the os uteri as large as a crown-piece; there were no labour pains, but she complained of a little, constant stomach-ache. At ten, the pulse was small, and scarcely perceptible; the presence of fluid in the peritonæal cavity was plainly detected. The quantity of liquor amnii was very great, and the uterus felt exceedingly tense. She was delivered by artificial assistance, and died at half-past eight A.M. The child was a male: its sexual organs presented the same deformity as those of the twins. On examination, thirty-two hours after death, the surface of the body was very pale. On an abdominal section, a large quantity of fluid and coagulated blood, estimated at between five and six pints, was found in the peritonæal cavity. All the viscera of the thorax and abdomen were pale, but healthy. The uterus was large, soft, and pulpy. On the fundus, there was found a laceration of the peritonæal coat, passing transversely, exposing the proper tissue, but not implicating it. On the posterior part, and to the right side, of the body of the viscus, there was another laceration, of zigzag form, implicating the superficial uterine fibres, and exposing a large vein, from which, doubtless, the greater portion of the blood found in the peritonæal cavity had proceeded.

Dr. Lever, 16*th of November*, 1846.

3.—Specimen of a rare form of Uterine Disease.

This disease seems to consist *in ulceration of the whole or chief part of the lining membrane of the uterus*, under which the parietes of the organ become softened in structure, much as they do in pregnancy, and generally irregularly thinned in substance, while the cavity is considerably dilated, and contains coagula, unhealthy, fœtid pus, and portions of shreddy fibrin, which adhere with greater or less tenacity to the internal surface.

The disease is interesting in three points of view;—first, on

account of its rarity; secondly, because in three out of the four cases which have been narrated it was mistaken for pregnancy; and thirdly, from its fatal tendency. It is unlike the more ordinary cases, (although they are also very rare,) that have been reported under the term *hydrometra*, because in them the internal surface of the uterus had undergone no perceptible morbid change, and because the os uteri was obliterated by adhesion, while in the present class of cases the os uteri remains pervious, or is only plugged by rough mucus.

The case which was the immediate cause of this affection of the uterus being brought before the Society, offered a further ground of considerable importance, from being complicated with another rare disease, mollities ossium, of about twelve years' standing. During this time the patient had lost eleven inches in height, having been when married five feet high, while, when she died, she only measured four feet one inch. She was married sixteen years ago, in her twentieth year; and during the first four years and a half had three living children; she then had a dead child, after a very severe labour; shortly before which pregnancy the disease would appear to have commenced; another child was delivered by craniotomy; and in her last pregnancy, six years ago, premature labour was induced at five months, and the fœtus, though so small, passed with difficulty. At the time of her death the pelvis had become so highly contracted that from the promontory of the sacrum to the symphysis pubis it measured only one inch and three-eights; on the right side, in the same direction, one inch; on the left side three-quarters of an inch. The right oblique measurement was three inches, left, three and a quarter; transverse diameter three; depth from brim to tuber ischii, on right side, three inches and five-eighths, left, three inches; space between spinous processes of ilia, nine inches; between tubera ischiorum three inches. The lower part of the spinal column was so much thrust downwards and forwards, that the upper part of the fourth lumbar vertebra was opposite the symphysis pubis, and the sacrum was exceedingly bent. Thus the pelvis, during the last eleven years and a half of her life, had become diminished from at least three inches or more, in the conjugate diameter at the brim, affording a space sufficient to allow the passage of a live child at

full time, to the small size just noted. The vertebræ, bones of the pelvis, and head of the femur, were so soft as to be easily cut with a cartilage knife; they were of a dark colour, and spongy appearance, and had a thin layer of osseous matter externally; and a quantity of thick oily matter oozed from their sections when scraped. The thickness of the pelvic bones was much diminished.

The following account of the case was furnished by Dr. John Hall Davis:—"Two years ago she had sustained a severe loss of blood from the uterus, both fluid and clotted, and was then considered in danger, but nothing like a fœtus came away, as far as could be learned. Up to October in last year she menstruated with perfect regularity; the function then ceased until April of this year, when she menstruated once; since which there has been no catamenial appearance. She therefore thought herself pregnant, especially as she further had enlargement of the breasts, with a secretion of milk in them, morning sickness, enlargement of the abdomen, and a sensation as though she had quickened. She was first visited on October the 24th. No well circumscribed solid enlargement of the uterus could be distinguished. The application of the stethoscope elicited no sign of pregnancy; there was no varicose state of the veins, as in her former pregnancies; the breasts were enlarged, and contained a milky fluid, a state in which they had not been since her last pregnancy, for six years before.

"*Examination per vaginam.*—The conjugate measurement of the pelvic brim, as well as could be taken with the outlet of the pelvis, also a good deal contracted, did not give more than an inch and an half, if so much, and there was perceptibly less space on either side of the sacral promontory. The mouth of the uterus was found open, admitting the tip of the index finger; the part of the uterus above, and immediately adjoining the vaginal attachment, could not be felt, owing to the narrowness of the brim; so that no idea could be formed as to the degree of uterine enlargement or development by the vaginal examination. A staff, or bougie, was now passed, to measure the length of the uterine cavity, and it proved to be five and a half inches, shewing a considerable expansion. Withdrawing the bougie two inches, that it might not press against the fundus, it was left *in sitû* for five

hours, the bladder having been first relieved. At the end of that time (ergot of known good quality having also been given in the interval) no action had been induced, and the instrument was removed. A sponge tent was then introduced within the uterine orifice, and the vagina was plugged with sponge. This was withdrawn on the following night. Some bearing-down pain had been occasioned, but that ceased; on the removal of the plug, some stiffish mucus, and a slight sanguineous discharge, blended with mucus, came away. During the following day she got up, and sat as usual in her chair, thinking that her child would be born on the seventh day, as on the previous occasion.

"On Friday, the 30th, she was seen by Dr. F. Ramsbotham, who concluded she was not pregnant, but that it was a case of extension of the uterine parietes and cavity, attended by ulceration of the lining membrane of the uterus, with pus and dark grumous blood for contents, as shewn by the material of this kind which was passed by the catheter.

"On the following morning she was seized with a shivering, and at three P.M. with a severe flooding. At four P.M., the vagina was plugged, and the flooding was arrested. About seven the plug was removed. A profuse action of the bowels set in, owing to about two drachms of castor-oil which she had taken in the morning; and she speedily became prostrate, with cold clammy skin and dyspnœa; the pulse scarcely perceptible. In the morning she had rallied; her pulse was good; the temperature of the skin natural; but the breathing was very difficult, there was some red discharge, mixed with fibrinous matter, evacuated during the day.

"On Monday the napkins were very little coloured, and afterwards not at all; but she gradually suffered more and more in her breathing. This continued during Tuesday; she became worse at night, and died on Wednesday morning.

"For upwards of six years this poor creature, in consequence of the osseous deformity, had been unable to abduct the thigh-bones in the least. She had not been able to get into bed herself; her husband had lifted her in, and about, during the same period; she had required to be assisted even in making any change of position in her bed. She could not lie on either side without great

aggravation of a dyspnœa and cough, which she had had ever since the deformity of her chest became so extreme; her position, therefore, when recumbent, had been constantly on her back. She could move herself along a plane surface on crutches, and went up and down stairs in a sitting posture, shifting herself thus from step to step.

"Her legs and arms did not partake of the deformity, probably from not having been subjected to the same pressure as the spine and pelvis; but they were much attenuated."

The immediate cause of the patient's death appeared to have been inflammation of the lungs; and, besides what has been already detailed in regard to the size of the pelvis and condition of the bones, the following appearances presented themselves on post-mortem examination. The body was greatly emaciated, measuring, as before stated, four feet one inch in length; the cavity of the chest was much contracted; the pericardium rather opaque and thickened; no more serum in the cavity than natural; the heart perfectly healthy, but small, and rather flattened posteriorly; no pleuritic adhesions, nor any effusion into either cavity; the lungs small and much congested, sinking in water, not crepitating; of a dark colour; no appearance of hepatization, nor traces of tubercles; the liver small, softened, of a yellowish colour; two gall-stones in the gall-bladder; all the other abdominal viscera healthy; the ovaries small, wasted; no sign of a corpus luteum. The uterus was enlarged, measuring five inches from its mouth to the fundus; its structure was softened; the parietes were not much altered in thickness; but the internal membrane, as might be seen in the specimen presented, was destroyed at different parts by ulceration, and the cavity contained fœtid pus and broken-down coagula; the ulceration was more evident towards the cervix than at any other part. Dr. Ramsbotham, 16*th of November*, 1846.

4.—A peculiar form of Tumour of the Uterus,

taken from a woman aged forty-six, of intemperate habits, who had died after amputation of the hand, which had been affected with dry gangrene from arteritis.

In the examination after death, the heart was observed large, flabby, and thin; the valves healthy; there was slight atheromatous

deposit in the thoracic and abdominal aorta. The left axillary artery was filled with a fibrinous plug three inches in length; below this the vessel was pervious and healthy for two inches and a half, where a large branch was given off, immediately after which it diminished to nearly half the size of the healthy portion, and continued so to the bend of the elbow. On being laid open, this portion presented a deep blood-red colour, with small flakes of lymph on its surface; the coats were unusually soft, and the vessel broke just above the bifurcation, though removed with care. The radial artery was very small. The liver was in an advanced stage of fatty degeneration. The cavity of the pelvis was occupied by a tumour which rose into the abdomen, and consisted of the distended uterus, inclosing a tumour of a circular form, measuring five inches in diameter. It had been developed in the muscular structure of the posterior wall of the uterus, nearer to the internal than the external surface; a very thin layer of muscular fibre separated it from the cavity of the uterus, which was enlarged, though its sides were approximated by the pressure of the tumour; on its outer surface the tumour was covered by a muscular layer half an inch in thickness. The substance of the tumour presented an opaque, milk-white appearance, of the consistence of the mammary gland. In some lobes, where the anatomical arrangement was most evident, it seemed composed of separate bodies, of various form, contained in, and connected with, the parietes of cysts. The section presented none of the ordinary appearance of the hard fibrous tumour of the uterus, and under the microscope but a small amount of fibrous matter could be shewn. It seemed made up of minute granular matter, with a small amount of wavy, filamentous structure. No distinct nucleated cells were discoverable. The tumour appeared much to resemble the sero-cystic tumours of the breast in a late stage, as described by Sir Benjamin Brodie, and was a good illustration of that class of adventitious morbid growths described by Dr. Hodgkin in the fifteenth and twenty-sixth volumes of the "Med. Chir. Trans.," as developed in the type of compound serous cysts.

The preparation is in the museum of St. Thomas's Hospital.

Mr. William Adams, *4th of January*, 1847.

5.—Carcinoma of the Uterus and Vagina.

The woman, aged 41, came under Dr. Smith's care in November, 1845, with a ragged ulcer of the cervix, which was much corroded, and covered with fungoid lobules, extending also into the canal of the cervix: the uterus itself being fixed by adventitious deposit in the surrounding cellular membrane. In three months the disease had involved the whole of the vagina (excepting about one inch externally,) which was covered with freely-bleeding fungoid granulations, the cervix having become nearly destroyed by ulceration. After three months' treatment, her general health and the local disease became much improved, and remained so for five months. At this time, seven months before death, vesico-urinary fistula occurred. A week prior to death symptoms indicative of perforation of the rectum supervened. On the post-mortem examination, the emaciation was found extreme; the viscera of the chest and abdomen were healthy. The contents of the pelvis, particularly the rectum, fallopian tubes, ovaries, and fundus uteri were adherent by lymph. The vagina presented a large fistulous opening into the rectum, and another in the intervening septum between the bladder and vagina, which was closed by the mucous membrane of the anterior wall of the bladder. The cervix and body of the uterus were destroyed by ulceration.

A microscopic examination of the tumour exhibited a fibrous texture intermingled with cells and cytoblasts, varying in size and shape. The fibres were observed in every stage of development, containing at intervals cells or cytoblasts, together with a varying quantity of granular matter; large pigment cells were also observed. Dr. P. Smith, *7th of June*, 1847.

DISEASES OF THE EYE AND EAR.

1.—Series of Preparations and Drawings illustrative of Malignant Disease of the Eye,

in order to prove the futility of operative interference in any stage of such affections. The result of extended experience convinced Mr. Dalrymple, that where the globe had been extirpated at the earliest possible stage of the disease, the death of the patient was

brought about, sooner or later, by the formation of secondary tumours in the brain, in the same manner as when the globe had been extirpated at a more remote period of the disease. The particulars of several of the specimens were detailed at length, proving the above assertion; and the following case was quoted as a type of the average course of the disease:—

A child, two or three years old, came under his care in the beginning of the year, some time back. At the posterior part of the eye were observed three small deposits of fibrin, leaving a triangular space of the choroid between them. These gradually extended forward to the ciliary boundary of the choroid, and became vascular, pushing the iris forward into the anterior chamber. They became gradually more and more vascular, the triangular space between them gradually diminishing. In proportion to their increase the iris became more prominent, and by degrees vascular. In May, the globe was hard, the sclerotic bluish, and the iris more convex. In August, the globe was enlarged, the iris narrower, the lens in a state of incipient opacity, the lids of a purplish hue, and there was pain in the globe. In September, the eye was enlarged, the pupil large, the lids livid and swollen, so that they could not be closed: there was deep-seated sclerotitis, a dark blue zone near attachment of cornea, and a fungoid mass in the anterior chamber, with effusion of lymph; the child suffered from headache. In December the globe gave way, the conjunctiva was crimson and velvety, there was slight bleeding, headache, and pain over brow. In January the tumour equalled the size of an apple, and was covered with a dark crust: there was drowsiness and emaciation. In March, the tumour was much enlarged. On the 25th, stupor and convulsions occurred, and terminated in death.

On post-mortem examination small tumours were observed connected with the bone under the scalp. The dura mater opposite the tumours was soft and thick, as was also the arachnoid. The ventricles contained one ounce of clear fluid. A large encephaloid tumour was situated at the base of the brain, and was limited by the olfactory nerves, the pons Varolii, and the sides of the middle lobes, involving the right optic nerve; the third pair, however, being but little interfered with. The sclerotic was crushed, and emptied of its contents, the cavity of the eye being filled by a

reddish medullary growth, traced from where the optic nerve entered. The muscles and lachrymal gland were unaffected.

Another reason contra-indicating the removal of the globe, it was remarked, was the occasional existence of an affection of the eye, in no way distinguishable, as regards physical appearance, from the first stage of malignant disease. This affection consists in the effusion of an albuminous fluid between the retina and choroid, causing protrusion of the lens, and giving rise to the cat's-eye appearance. Of two specimens which were exhibited as illustrative of this affection—in one there was mere serous effusion; in the other, serous effusion, accompanied with the deposit of flocculent tripe-like-looking lymph, on the external surface of the retina. Mr. Dalrymple, 15*th of March*, 1847.

2.—Fœtus displaying absence of the external Auditory Meatus on both sides.

This infant, which had come under the notice of a friend of Dr. Lloyd's, was born alive at seven months and a half, and died from hæmorrhage, owing to the midwife forgetting to tie the umbilical cord. It was the fourth child of the same parents; the other children were healthy, and no hereditary disposition to the malformation could be traced. Dr. Lloyd, 4*th of January*, 1847.

At the following meeting Mr. Toynbee stated that, at the request of Dr. Lloyd, he had examined the state of the auditory apparatus. The external ear consisted of a fold of integument, having much the same shape and size as the ordinary lobe, but containing no cartilage. The external meatus was wholly absent; there was no membrana tympani; the cavity of the tympanum was a mere fissure in the bone, and contained two bony fragments, the analogues of the stapes and malleus, and had the Eustachian tube opening in its anterior part. The cochlea, vestibule, semicircular canals, and auditory nerve, appeared perfectly natural. Both ears were similarly malformed.

DISEASES, ETC. OF THE OSSEOUS SYSTEM.

1.—Interstitial Disease of the Neck of the Femur following Injury.

The preparations exhibited were sections and drawings of the head and neck of the left femur, from a patient who was supposed to have sustained a fracture of the neck of the bone. The capsular ligament of the joint was much thickened; the margin of the acetabulum broader than usual; but the cavity was natural, and the round ligament entire. The head of the bone and the great trochanter were on the same plane, and the neck was much shortened behind, so that the articulating surface was directed more posteriorly than usual. Several firm fibrous bands extended towards the circumference of the head of the bone, and these covered, in part, a large, irregular, bony projection, encircling the neck, and most conspicuous in front. The bony structure was atrophied, and the cancelli filled with oily matter. Portions of dense bone extended at each side of the neck into the substance of the head, from the points where the irregular bony projection was situated externally, and between these the structure was more compact than elsewhere. A distinct line was traceable between the extremities of the dense columns of bone. The patient, seventy-nine years of age, had fallen from the top of a stair upon his hip, eleven months before his death. He had recovered sufficiently to be able to get about with the aid of crutches; the foot, however, was slightly everted, and the injured limb was an inch shorter than the other. Dr. Peacock, *20th of October*, 1847.

2.—Fibrous Tumour of the Lower Jaw.

The preparation, accompanied with a drawing by Mr. Gowlland, was exhibited. The tumour, with the portion of jaw implicated in the disease, was removed by Mr. Adams, from a healthy man, aged twenty-four, who first complained of tooth-ache five or six years ago, for the relief of which a molar tooth was extracted at the time. About twelve months afterwards, a substance was observed growing from the part originally occupied by the tooth, which continued to increase in size until two years ago, when he

placed himself under the care of a practitioner in the country, who removed the tumour by the application of the cautery and caustic. It soon, however, grew again, and continued to increase until his admission into the London Hospital, two months before. The tumour had then attained the size of a small orange, and appeared to spring up between the plates of the bone close to its base, the plates being separated so that there was a considerable bulge externally, and protrusion into the mouth, in the form of a large lobulated mass, highly vascular. It occupied the left side of the lower jaw, from near the symphysis to the angle. The man was well in ten days after the operation.

The tumour, on section, was found to be of a simple epuloid character, and had evidently sprung from the cancelli near the base of the jaw; it presented a beautifully striated appearance, the striæ passing in a vertical direction. Its free surface was impressed with the crowns of the molar teeth of the upper jaw. It had gradually thinned out the lamellæ of the bone, which in some parts was reduced to a mere shell. The fibrous arrangement of the tumour was well represented in the drawing.—Mr. N. Ward *for* Mr. John Adams, 16*th of November*, 1846.

3.—Tumour of the Lower Jaw,

removed by Mr. Key. The patient, a boy, aged thirteen, was admitted into Guy's Hospital in October, 1841. He was pale and sallow, with a high and somewhat projecting forehead, light hair and eyes, and emaciated appearance. In consequence of his not being able to articulate distinctly, some difficulty was experienced in obtaining a history of the case. The following particulars were noted at the time:—

About two years ago, a small lump appeared on the anterior part of the lower jaw, gradually increasing and extending backwards, and forcing out, after a time, many of the lower teeth. He had never experienced any pain. The jaw gradually increased in size, when he applied to a surgeon, who tried various remedies without relief. He always enjoys a fair share of health, and can eat and drink well.

When admitted into the hospital, the lower jaw was apparently much enlarged and thickened, and advanced beyond the upper.

There rested upon the upper part of the symphysis a globular, vascular sarcoma, which, about fourteen days before, had begun to ulcerate on the surface, and had bled profusely at intervals. Styptics had been applied to arrest the hæmorrhage.

Seven days after admission, Mr. Key determined to remove the diseased part, and the operation was accomplished in the following manner :—An incision was made along either side of the horizontal ramus of the lower jaw, commencing from the angle in the hollow of the neck, and meeting each other in the mesial line; the flap was turned up, and the cut vessels immediately secured; the lower jaw was sawn through, just anterior to its angles, detaching a small portion of the masseter muscle on each side. The jaw was carefully dissected out, the flap brought together, and sutures applied.

On the fourth day, the sutures were removed, and the whole of the wound had nearly healed. He left the hospital on the 9th of November, having had no bad symptom, and is now in perfect health.

The condition of the jaw prior to and after the operation was illustrated by drawings.

Dr. Bentley *for* Mr. Key, *15th of February*, 1847.

Three Specimens of Tumours of the Upper Jaw.

4.—*Osseous Tumour, involving the Right Superior Maxilla and the Malar Bone.*

This specimen was removed from the face of a girl, aged fourteen. The enlargement was noticed six or seven years before the operation, and seemingly commenced in the alveolar ridge. There was no trace of the antrum. The patient made a favourable recovery, and has remained well since.

5.—*Osteo-Sarcomatous Tumour, involving the Greater Part of the Left Superior Maxilla.*

The tumour which was removed from a woman, thirty-six years of age, projected slightly into the mouth, and filled the interior of the antrum. Portions of the alveoli had been removed on two occasions previous to the last operation, when the whole mass, in-

cluding the malar bone, was extirpated. The operation was performed about three months before, and there had been no indication of return of the former disease. The reappearance of the disease, which did not indicate malignancy in its physical characters, might probably admit of explanation, by reference to the manner in which the growth had extended in an upward direction, so that it was not isolated by the horizontal sections of the alveoli which had been made for its removal at the first operation.

6.—*Portion of a Medullary Tumour occupying the Site of the Superior Maxilla.*

This tumour was removed, after death, from a man, aged fifty-four. An operation had been proposed at an early period; but the patient refused to submit. The tumour grew rapidly, and he was anxious for an operation when it was too late. It extended to the base of the cranium, and had all the characters of malignancy.

Dr. G. Johnson *for* Mr. Fergusson, 15*th of February*, 1847.

8.—Necrosis of the Shaft of the Humerus, and of the Head of the Femur.

The patient, a girl, aged ten, came under the care of Dr. Ward in August, 1844, complaining of a tingling pain down the right arm to the hand, and of the right hip, down the back of the leg to the foot. This was followed, in six days, by a high state of fever and phlegmonous erysipelas of the right shoulder and arm. An abscess formed in two days, and which was punctured about the middle of the arm, a large quantity of healthy and sanious pus escaping. A few days after the opening of the abscess, a red spot appeared over the head of the humerus, and ulcerated in about a fortnight; through this ulcerated opening, the head of the bone, deprived of its epiphysis, protruded to the extent of two inches, the other wound having healed in the interim. She soon afterwards entered St. Bartholomew's Hospital, where she remained fifteen weeks, at the end of which time nearly the whole length of the humerus was extracted, and the wound healed rapidly. After her return, there appeared to be anchylosis of the joint; and shortly afterwards she was thrown down, the

new bone becoming bent at its upper third, in which state it still remains. At this time, the head and upper part of the thigh-bone were affected with periostitis, followed by the formation of several abscesses about the great trochanter, and the discharge, at intervals, of small pieces of bone. The disease of the thigh-bone continued for more than a year and a half, and the healing of the sinuses was immediately preceded by the coming away of a large portion of the head of the bone. The patient now enjoys good health, the right arm being shorter by two inches than the left; there is great mobility of the scapula, and when this is fixed, there is motion of the arm to the extent of 20°. The right leg is an inch and a half shorter than the left; and in consequence of a false joint between the femur and ileum, she possesses tolerably free movement.

Microscopic Examination of Sections of the Necrosed Bone.

The upper portions, which had suffered necrosis, exhibited when thin sections were examined, not only a discoloration round the Haversian canals, but the discoloured portions were found corroded out, and separated from the sound parts. In thicker sections the structure seemed unimpaired, and the canaliculi were apparent even in the discoloured parts. The lower part of the bone, which presented the appearance of ordinary caries, exhibited no change in its minute structure. The necrosed portion had a very offensive smell, from which the carious portion was free. It was inferred that the disease originated in the necrosed portion itself, and that the periosteum and soft parts became secondarily affected in order to give exit to the dead bone which had been destroyed by the pus or other corrosive matter thrown out by the vessels in the Haversian canals; and also that the carious portion, being only affected by the disease of the periosteum surrounding it, suffered no change in its internal structure. In a drawing by Mr. Bowman, exhibited to the society, the dilatation of the Haversian canals in acute necrosis was well shewn.

Dr. Ogier Ward, 1*st of February, and* 1*st of March*, 1847.

9.—Dislocation of the Astragalus,

which had become separated from its connections with the os calcis and the bones of the leg, neither the tibia nor fibula having been fractured or separated from each other.

The astragalus was so tilted on itself that the under surface looked towards the outer malleolus, being confined by the peronæi tendons which passed over its posterior aspect; the head was so tightly embraced by the annular ligament and tendons of the extensor longus digitorum, as to render reduction impossible. An analogous case had come some time before under the notice of Mr. Liston, in which, although the foot was put straight, it was impossible to reduce the bone. Mr. Liston, *5th of April*, 1847.

10.—A Specimen of Dislocation of the Radius Forwards; accompanied with a Cast and Drawing.

The accident had happened eight or ten years before the death of the patient, and attempts at reduction had never been successful. The head of the radius rested partly on the coronoid process, and partly on the outer condyle of the humerus; the neck of the bone being firmly grasped by the anterior half of the external lateral ligament, so as to prevent its reduction. There was a false joint to the head, surrounded by the tendon of the biceps, brachialis anticus, and supinator longus. The case was interesting, as leading to the inquiry of the means of reduction in similar cases. Mr. Hilton observed that this could be effected by placing a fulcrum between the head of the radius and the humerus, and flexing the forearm through the medium of the ulna alone. In support of this method of reduction, he instanced a case of a child in which the bone had been replaced with facility.

Mr. Hilton, 21*st of June*, 1847.

11.—A Specimen of Dislocation of the Humerus into the Axilla, with Subsequent Interposition of the Capsular Ligament between the Head of the Bone and the Glenoid Cavity.

The accident had occurred four or five years before. At the time of the injury reduction was easily effected, but the joint remained

remarkably moveable. The great tubercle, and the muscles attached to it, with the capsular ligament, were torn from the rest of the bone so that the head of the bone was in contact with the external surface of the capsular ligament, the latter being situated between it and the glenoid cavity. The tendon of the biceps was split vertically. The deltoid and coraco-brachialis were in immediate contact with the head of the humerus.

Mr. Hilton, 21*st of June*, 1847.

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13. — Two Sections of Bone, presenting, under the Microscope, the ordinary Characters of Normal Bone, taken from Medullary Fungoid Tumours attached to Tendinous Structures, unconnected with Bone or Periosteum.

One of these sections was taken from a tumour measuring four inches and a half in its longitudinal, and three inches in its transverse diameter, removed from the outer side of the arm of a man, æt. forty-three, a blacksmith, who stated that he had always enjoyed good health, with exception of occasional attacks of rheumatism. The tumour had been thirteen months forming; it had never been painful, and was inconvenient only from its bulk and situation; its base was connected with the insertion of the deltoid muscle and external intermuscular septum. The tumour was composed nearly entirely of firm osseous tissue, presenting generally a finely-cancellous appearance, but very dense and compact in patches; a small quantity of fibrous matter was scattered through the tumour, on one side of which, towards the base, was an irregular mass of soft, opaque, obscurely-fibrous structure, presenting the ordinary characters of the firm variety of the medullary fungoid tumour. The section of bone from this tumour, exhibited the Haversian canals, somewhat irregular, but complete in their outline, and surrounded by osseous corpuscles with their canaliculi; the lamellæ were distinct. Three weeks after the removal of this tumour, a lobulated and distinctly moveable tumour could be felt beneath the skin close to the cicatrix; at the same time, a tumour from the left ilium made its appearance; a fortnight afterwards pain in the head, giddiness, and partial coma indicated disease of the brain; he remained in this condi-

tion for five weeks, and died. The tumours of the arm and ilium had both considerably increased in size, but the latter only was attended with pain. At the post-mortem inspection, three lobulated tumours, from an inch and a half to two inches in diameter, were found attached along the outer head of the triceps muscle, perfectly moveable, and separated from the periosteum by healthy tendinous structure; they were of very soft consistence, and made up of a large quantity of membranous structure, having a distinctly cystiform arrangement, and enclosing in its meshes an opaque, thick, creamy, semifluid material, which oozed out abundantly from the surface of the section; throughout these tumours were numerous isolated patches of firm osseous tissue, dense and compact in their centres, from which delicate processes radiated along the membranous septa of the lobes of the tumour in which they were situated; this appearance is well seen in a thin section of one of the tumours dried and immersed in spirit of turpentine. A section of one of these isolated patches of bone, made by Mr. Rainey, and exhibited to the society, shewed the ordinary characters of osseous tissue, but less completely formed than in the preceding specimen, as might have been expected from its recent development; many of the corpuscles were imperfectly formed, and without canaliculi, whilst in others the canaliculi were perfectly distinct; the Haversian canals were imperfect, one side being more distinct than the other, and the lamellæ indistinct. A drawing, exhibiting the situation of these tumours, accompanied the preparations. A vertical section of the os humeri shewed that the bone was perfectly healthy. Soft medullary fungoid tumours were found in the liver, lungs, brain, &c. The tumour of the ilium was of the same character, but involved the substance of the bone, as was also the case in a tumour from one of the ribs.

The preparations, with several others from the same case, are in the museum of St. Thomas's Hospital.

Mr. Wm. Adams, 21*st of June*, 1847.

14.—Specimen of a Large Cartilage Extracted from the Knee-Joint.

The following are the particulars of the case :—A farmer, aged twenty-five, came under the care of Mr. Adams, about two years and a half before, on account of a slight contraction of the left leg, at the knee-joint, of several years' standing. In the course of ten or twelve days, the deformity was remedied by the compound splint and screw, and the limb continued free from uneasiness till last June, when violent pain, heat, and swelling, suddenly supervened in the knee-joint ; a hard body near the head of the fibula was soon afterwards observed, which, on slight pressure being applied to it, slipped into the joint, and completely disabled him from walking for the time. Its mobility being such that it was impossible to secure it in such a position as not to impede the motion of the joint, it was removed by an incision made by a bistoury through the integuments, near the tendon of the biceps, in which situation the loose body had been previously secured. It was the size of a large flattened bean, and appeared to consist of cartilage with one smooth side, and another rough, where it seemed at one time to have been connected with one of the bones of the leg. It weighed one drachm, eight grains. No unfavourable symptom followed the operation.—Dr. Bentley for Mr. F. Adams, *of Banchory, 18th of January*, 1847.

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15. — Chemical Constitution and Minute Changes in Bone affected with Mollities Ossium.

The female whose case was narrated by Dr. Ramsbotham at the meeting of the Society on the 6th of November, was the subject of this disease. Specimens of the bone had since been submitted to microscopic examination by Dr. Sharpey, Mr. Dalrymple, and Mr. John Quekett, who had remarked that the Haversian canals and the bone cells were much larger than natural. In parts, near the edges of the bone, forming the wall of the Haversian canals, the canaliculi were but slightly visible, or had entirely disappeared. The bone along the edges above-mentioned, was extremely transparent ; and numerous nucleated cells, blood discs, and fatty matter, occupied the cancellated

structure, and some of the Haversian canals. The bone had also been examined chemically by Dr. Garrod, who found that 100 parts dried at 212° yielded—

Phosphate of Lime	16·40
Carbonate of Lime, with Phosphate of Magnesia	4·88
Fatty Matter	20·35
Gelatine yielding Matter	58·37
	100·00

thus exhibiting a considerable difference from the proportions given for healthy bone by Berzelius, viz.—

Earthy Matters	66·70
Animal Matters	33·30

The history of the case was then detailed, and it appeared that the female had, at the commencement of the affection, lived in a dry climate, and for the last six years of her life in Lancashire, on the borders of a lake surrounded by woodland. There had been no hereditary tendency, the father and mother being still alive, and of five other children, all enjoyed perfect health. She had never been affected with rheumatism, and died from an acute attack of pneumonia. Dr. J. Hall Davis, *1st of Feb.* 1847.

16.—Extensive Injury to the Knee-Joint.

The patient, a strumous boy, aged sixteen, and who had come under the care of Mr. Ward of Epsom, was riding carelessly over a rough road when the horse suddenly stumbled and fell to the ground with much violence, the boy's left knee coming, at the same time, in contact with a sharp flint, which penetrated the inside of the articulation by an irregular lacerated opening, admitting the easy introduction of the finger. He progressed favourably till the fourth day, when he complained of general stiffness all over the body, intense pain in the articulation, which had become much swollen, the wound leading to it having assumed a sloughing appearance, and from which escaped a copious discharge of unhealthy looking pus which also distended the popliteal space, and was burrowing under the quadriceps extensor muscle. There was also considerable tumefaction of the thigh with congestion of the superficial veins. The pulse was 130, the face flushed, and the tongue rather dry. The limb having

been removed, it was found that the inner part of the capsular, with the internal lateral ligament, was extensively lacerated, the joint distended with purulent fluid, mixed with a little blood which had burrowed beneath the extensor muscle four inches up the thigh, also into the poplitæal space, the synovial membrane being much thickened and injected. A large triangular piece had been taken off in a vertical direction, and as though with a sharp instrument, from the inner part of the head of the tibia, carrying away with it more than half of the internal semilunar cartilage. The anterior part of the internal condyle of the femur was denuded of cartilage, to the extent of an inch and a half transversely, and one inch from above downwards, leaving exposed the cancellous structure of the bone which was jagged and irregular, and in which was imbedded several large sharp triangular portions of flint. Similar, but smaller, portions of flint, mixed with sand, were found in the joint, and in the exposed surface of the tibia, and one large piece in the substance of the extensor muscle. Mr. N. Ward, *15th of May*, 1847.

MISCELLANEOUS.

2.—Rupture of the Diaphragm from Accident.

The specimen was taken from a man, aged twenty-four, who was admitted into St. George's Hospital, having fallen from a height of about twenty feet. He had fractured both arms, and sustained other injuries. On the day after admission he complained of a fixed, defined pain on the left side, a little below the hypochondrium; this was accompanied with slight hæmatemesis, and inability to take food. He appeared to progress favourably till the ninth or tenth day, when sudden prostration supervened, from which, however, he rallied. Similar collapse again returned, after a few days, and continued to do so at two or three distinct periods, till about the tenth week, when he was seized with pain in the abdomen, and constipation, followed by diarrhœa, and the passage of blood by stool. This was succeeded by an acute attack of pleurisy, from which he died in the thirteenth week after admission. He was nourished with enemata from the time of the

injury to his death, the incapability of taking food by the mouth continuing without intermission.

The entire surface of the abdominal cavity appeared, on the post-mortem examination, quite black; and at the lower part was observed a large cyst among the convolutions of the intestines, which contained pus and fæcal matter, and communicated with the lower part of the colon. The left pleural cavity presented evidence of very acute inflammation, there being two distinct circumscribed effusions, the one at the upper and the other at the lower part of the cavity. The latter was situated between the lower portion of the lung and the diaphragm, which presented a distinct laceration of about an inch across; and through this opening the abscess communicated with another in the abdominal cavity behind the stomach, and bounded also by the spleen and kidney. It contained about half a pint of pus. There was a further laceration, of about six inches in length, in that part of the diaphragm forming the wall of the abscess, which, however, did not appear to have been perfect.

The symptoms exhibited by the patient had led to a correct diagnosis of the injury sustained. The case was of great interest as regarded the period of time the man had survived the accident.

Mr. Cæsar Hawkins, 18*th of January*, 1847.

3.—Rupture of the Œsophagus and Diaphragm induced by violent Vomiting.

In this case the vomiting came on suddenly after dinner, and in the act the patient fainted. He rallied, and was again attacked with fainting, accompanied with a great desire to vomit, which, however, could not be accomplished. The ordinary symptoms of perforation now occurred with great intensity; and in thirteen hours after the first attack, the patient sank.

On examination, the œsophagus and diaphragm were found to have sustained rupture, and the contents of the stomach had been poured into the left pleural sac. This cavity was the seat of unequivocal signs of intense inflammation.

Dr. C. J. B. Williams, 18*th of January*, 1847.

4.—Larynx from a cut-throat case.

In this case there was not much bleeding, except immediately after the infliction of the wound. The instrument had passed between the cricoid and thyroid cartilages, and cut obliquely quite through the cricoid, leaving at the upper part of the wound that portion of this cartilage upon which the arytenoid cartilages rest. Though the cricoid cartilage was quite divided, the pharynx was not laid open, and consequently the patient could swallow with perfect facility. The voice was impaired, though the chordæ vocales and sacculi laryngis remained intact at the upper part of the wound. No main artery was divided. The patient sank on the day following the injury. He was fifty-seven years of age, and had inflicted the wound with a razor. Mr. Partridge, *7th of December*, 1846.

5.—An extensive lacerated Wound of the Rectum and Bladder, produced by the leg of a chair.

The patient, a man, aged forty-three, was admitted into St. George's Hospital, under Mr. Keate, in a state of collapse, and complaining of severe pain about the vesical region, and over the lower part of the abdomen. He stated, that a short time previously he had slipped off a table upon which he was standing, and that in his fall he had knocked over a chair, one of the legs of which having struck him on the side of the anus, had glanced off, and passed up the rectum. On examining the anal region, nothing was observed, with the exception of a slight laceration at the left margin of the anus, which did not penetrate more than a few lines in depth. A catheter was passed into the bladder, and a quantity of bloody urine drawn off. The pain soon spread over the whole of the abdomen, the collapse continued, and the patient sank, with symptoms of low peritonitis, in about twenty-one hours after his admission into the hospital. At the post-mortem examination no appearances of injury existed about the perinæum; but there was some ecchymosis in the neighbourhood of the slight wound at the margin of the anus. At about two inches and a half from this opening there was a large, lacerated wound in the front part of the rectum, through which two fingers were easily passed into the bladder, at its fundus, and on laying open this organ, another extensive laceration was found at the right side of

its apex, leading into the cavity of the peritonæum. The leg of the chair having slipped up the rectum, had thus transfixed this organ and the bladder from its fundus to its apex. The peritonæum contained a large quantity of bloody fluid, mixed with recently-effused lymph.

The preparation is in the museum of St. George's Hospital.

Mr. Prescott G. Hewett, 1*st of February*, 1847.

6.—Enlarged and thickened Bursa, removed from underneath the Fascial Insertion of the Gluteus Maximus.

The bursa was of several years' growth; it burrowed so completely beneath the tendon of the gluteus, that some of the fibres of that muscle were necessarily divided in the operation for the removal of the tumour.

The tumour was first tapped, and, its nature being surmised, it was removed by a large T-shaped crucial incision. The sac of the tumour contained some serum, and abounded in albuminous bodies. It was removed from a middle-aged man.

Mr. Partridge, 7*th of December*, 1846.

7.—Enchondroma from the Anterior Part of the Sheath of the Carotid Vessels,

which had been removed during life from a man of middle age. He stated that he first perceived it about a year before, in the form of a small lump, which gradually increased till it had attained the size of a large walnut. It was imbedded in the cellular tissue of the neck, beneath the angle of the jaw, and was closely connected with the carotid sheath. The lower part of the maxillary gland overlapped it. The case was interesting on account of the great rarity of enchondroma unconnected with bone.

Mr. N. Ward for Mr. John Adams, 13*th of March*, 1847.

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8. Cases and Drawings illustrative of some unusual forms of Malignant Disease.

1. Fibro-cartilaginous fungus from the exposed synovial surface of a bursa patellæ. Mr. Simon's observation of the case had extended over two years: a sinus had remained after an accumulation of fluid in the bursa had been removed by puncture: the sinus,

proving obstinate, was laid open; the growth in question slowly arose from the bottom of the wound, and attained a size of about three inches by two, when it was thought expedient to excise it. Subsequently to this operation the patient had recovered without inconvenience. The tumour, which cut like gristle, consisted of large cartilage-cells in a matrix of dense fibrous tissue; the elements of the latter were evidently of new growth, and contained clear nuclei. It was one of the many instances of disease in which it is pathologically impossible to distinguish malignant action from the modified hypertrophy of a secreting structure.

2. A case of melanosis, where no other malignant disease was found than one melanotic tumour, about the size of a walnut, growing into the cavity of the ankle-joint. It was free in the greatest portion of its circumference; and of course so far smooth and polished. Its narrowed base was fixed to the fibrous membrane of the joint in front, just under the extensor tendons.

3. A case of secondary deposit in the liver, where the material presented all the general characters of tubercle. It was yellowish-white, quite opaque, dry and friable; so that in carrying the nail along it a juiceless product was scraped up like the contents of a follicular tumour, and left a furrow, as in scraping cheese. The material seemed compressed and coherent, but not connected by fibre or blood-vessels. These characters increased towards the centre of the masses, becoming merged at the circumference in the common features of cancer. It had appeared that the malignant multiplication of germs in the liver must have been of immense rapidity: so that the first formed elements had been thrust, by successive new formations, away from blood-vessels, into the centre of a mass nourished only at its circumference; that thus these central parts (all the elements of which were imperfect cells) has undergone atrophy and compression, existing in the state of an excretion, and exhibiting characters analogous to those of the shrivelled cells in the centre of a follicular tumour. The primary disease had been in the rectum.

4. Two cases of renal cancer. In one of these the mucous surface of the prostate-gland had been the seat of encephaloid disease, which had been ascertained during life. A question had suggested itself — how far this comparatively superficial disease

of the prostate might have depended on the descent of cancer-germs from the kidney, and their development on the mucous membrane of the prostate. In the second case, something of the same kind seemed to have occurred; for, down the ureters there were straggling patches of fungous growth that did not include the submucous tissue, but seemed mere efflorescences of cancer on the epithelial surface. In both cases the renal disease was common encephaloid cancer.

5. A case of cancerous tumour growing from the outer surface of the dura mater, over the posterior columns of the cord, and prolonging itself along the sheath of one of the spinal nerves, so as to become continuous through the intervertebral notch with a mass of diffluent encephaloid matter scattered through the deep muscles. The tumour over the cord was very firm and, though small, had caused complete paraplegia.

6. In connexion with the history of the microscopical appearances in the case of bursal disease, a drawing was exhibited of some peculiar caudate bodies (developed by the elongation of cells) which was noticed in the reparation of ulcers of the cornea. Mr. Simon also described a peculiar coloured cell, often found in morbid fluids—ovarian and others, which was believed to owe its peculiarities of growth and colour to the previous occurrence of hæmorrhage modifying the natural processes of cell-growth in the part affected. Mr. Simon, *7th of June*, 1847.